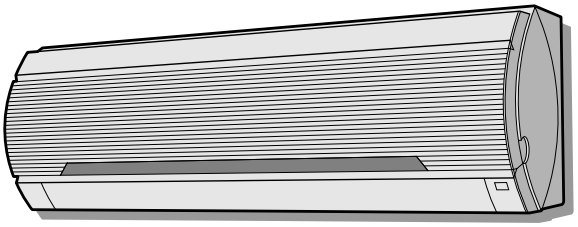
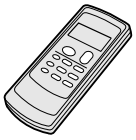
SHARP SERVICE MANUAL

S7222AYAP24CE



SPLIT SYSTEM
ROOM AIR CONDITIONERS



INDOOR UNIT

MODELS **AH-AP18CE AY-AP18CE**
AH-AP24CE AY-AP24CE

OUTDOOR UNIT

AU-A18CE AE-A18CE
AU-A24CE AE-A24CE

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

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SHARP CORPORATION

SPECIFICATIONS

ITEMS			INDOOR UNIT	OUTDOOR UNIT	INDOOR UNIT	OUTDOOR UNIT
			AY-AP18CE	AE-A18CE	AY-AP24CE	AE-A24CE
Cooling capacity ★		kW	5.1		6.7	
Heating capacity ★		kW	5.8		8.3	
Moisture removal ★		Liters/h	1.6		2.2	

Electrical data

Phase		–	Single			
Rated frequency		Hz	50			
Rated voltage		V	220 – 240			
Rated current ★	Cool	A	9.3 – 9.7		13.2 – 13.7	
	Heat	A	9.2 – 9.8		13.6 – 14.3	
Rated input ★	Cool	kW	2.01 – 2.15		2.68 – 2.84	
	Heat	kW	1.95 – 2.10		2.76 – 2.97	
Rated factor ★	Cool	%	98 – 92		92 – 86	
	Heat	%	96 – 89		92 – 87	
Compressor	Type		Hermetically sealed rotary type			
	Model		PH33VPET		2JS464D3AA02	
	Oil charge		900cc [DIAMOND MS32(N-1)]		1130cc (ATMOS M60 or SUNISO 4GD1D)	
Refrigerant system	Evaporator		Louver fin and Grooved tube type			
	Condenser		Corrgate fin and Grooved tube type			
	Control		Capillary tube			
	Refrigerant volume		1380g		1770g	
	De-Ice system		Micro computer controled reverse sysetm			
Noise level	High	dB(A)	40	52	44	54
(at cooling)	Med.	dB(A)	36	–	39	–
	Low	dB(A)	34	–	37	–

Fan system

Drive			Direct drive			
Air flow quantity	High	m^3/min.	15.3	48	18.1	46
(at cooling)	Med.	m^3/min.	13.4	–	15.0	–
	Low	m^3/min.	11.3	–	13.7	–
Fan			Cross flow fan	Propeller fan	Cross flow fan	Propeller fan

Connections

Refrigerant coupling		Flare type	
Refrigerant tube size Gas, Liquid		1/2", 1/4"	5/8", 1/4"
Drain piping mm		O.D ø 20	

Others

Safety device			Compressor: Internal protector		Compressor: Internal protector	
			Fan motors: Thermal protector(Internal)			
			Fuse, Micro computer control			
Air filters			Polypropylene net (Washable)			
Net dimensions	Width	mm	1040 (1155)	890 (1020)	1040 (1155)	890 (1020)
(Cartont dimensions)	Height	mm	325 (300)	645 (735)	325 (300)	645 (735)
	Depth	mm	220 (385)	327 (398)	220 (385)	327 (398)
Net weight (Gross weight)		kg	16 (21)	58 (62)	16 (21)	64 (68)

Note: The condition of star (★) marked item are 'ISO5151:1994(E), condition T1'.

ITEMS			INDOOR UNIT	OUTDOOR UNIT	INDOOR UNIT	OUTDOOR UNIT
			AH-AP18CE	AU-A18CE	AH-AP24CE	AU-A24CE
Cooling capacity ★		kW	5.1		6.7	
Moisture removal ★		Liters/h	1.6		2.2	

Electrical data

Phase		–	Single			
Rated frequency		Hz	50			
Rated voltage		V	220 – 240			
Rated current ★		A	9.3 – 9.7		13.2 – 13.7	
Rated input ★		kW	2.01 – 2.15		2.68 – 2.84	
Rated factor ★		%	98 – 92		92 – 86	
Compressor	Type		Hermetically sealed rotary type			
	Model		PH33VPET		2JS464D3AA02	
	Oil charge		900cc [DIAMOND MS32(N-1)]		1130cc (ATMOS M60 or SUNISO 4GD1D)	
Refrigerant system	Evaporator		Louver fin and Grooved tube type			
	Condenser		Louver fin and Grooved tube type			
	Control		Capillary tube			
	Refrigerant volume		960g		1320g	
	De-Ice system		Micro computer controled reverse sysetm			
Noise level (at cooling)	High	dB(A)	40	52	44	54
	Med.	dB(A)	36	–	39	–
	Low	dB(A)	34	–	37	–

Fan system

Drive			Direct drive			
Air flow quantity (at cooling)	High	m^3/min.	15.3	48	18.1	46
	Med.	m^3/min.	13.4	–	15.0	–
	Low	m^3/min.	11.3	–	13.7	–
Fan			Cross flow fan	Propeller fan	Cross flow fan	Propeller fan

Connections

Refrigerant coupling			Flare type			
Refrigerant tube size Gas, Liquid			1/2", 1/4"		5/8", 1/4"	
Drain piping mm			O.D ø 20			

Others

Safety device			Compressor: Internal protector		Compressor: Internal protector	
			Fan motors: Thermal protector(Internal)			
			Fuse, Micro computer control			
Air filters			Polypropylene net (Washable)			
Net dimensions (Cartont dimensions)	Width	mm	1040 (1155)	890 (1020)	1040 (1155)	890 (1020)
	Height	mm	325 (300)	645 (735)	325 (300)	645 (735)
	Depth	mm	220 (385)	327 (398)	220 (385)	327 (398)
Net weight (Gross weight)		kg	16 (21)	55 (59)	16 (21)	61 (65)

Note: The condition of star (★) marked item are 'ISO5151:1994(E), condition T1'.

EXTERNAL DIMENSIONS

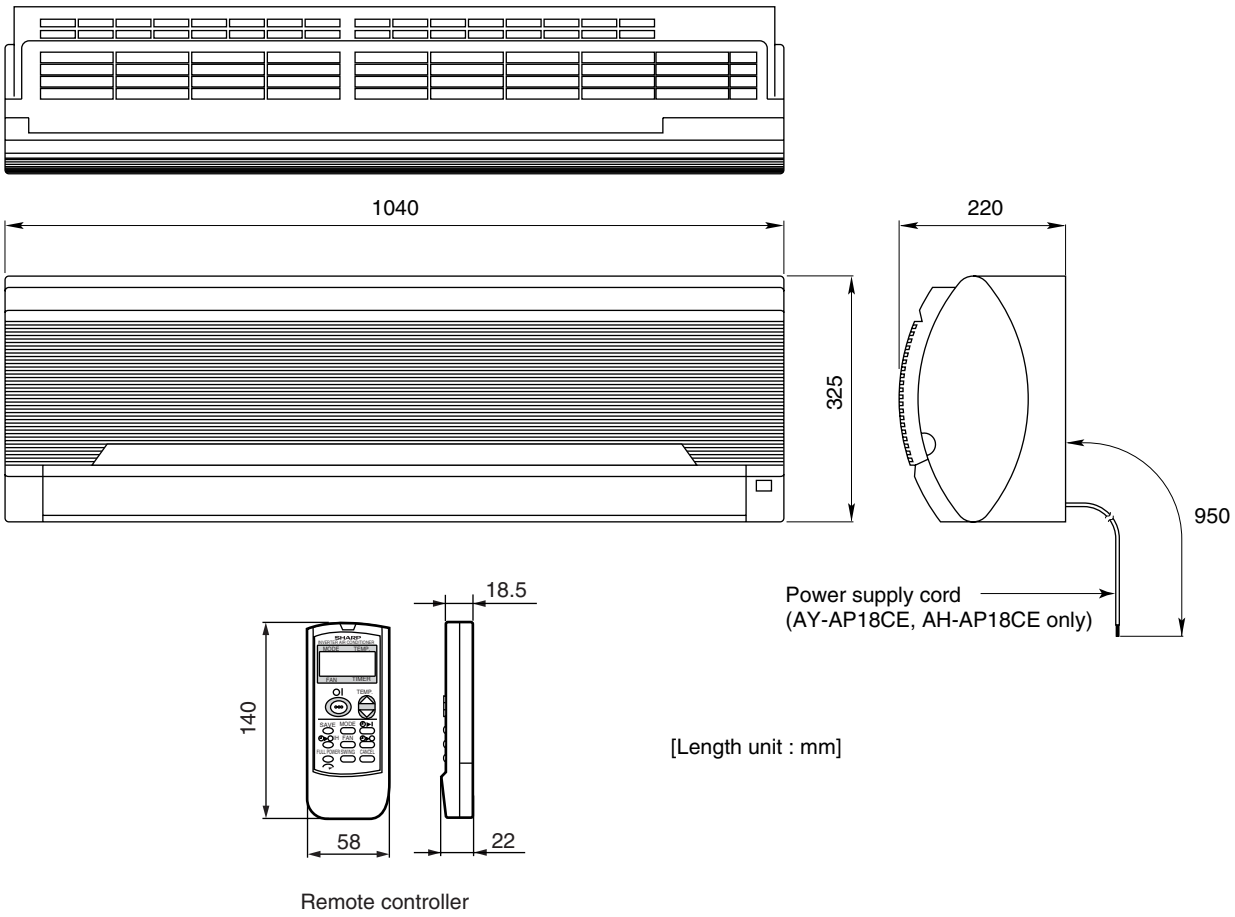


Figure E-1. INDOOR UNIT

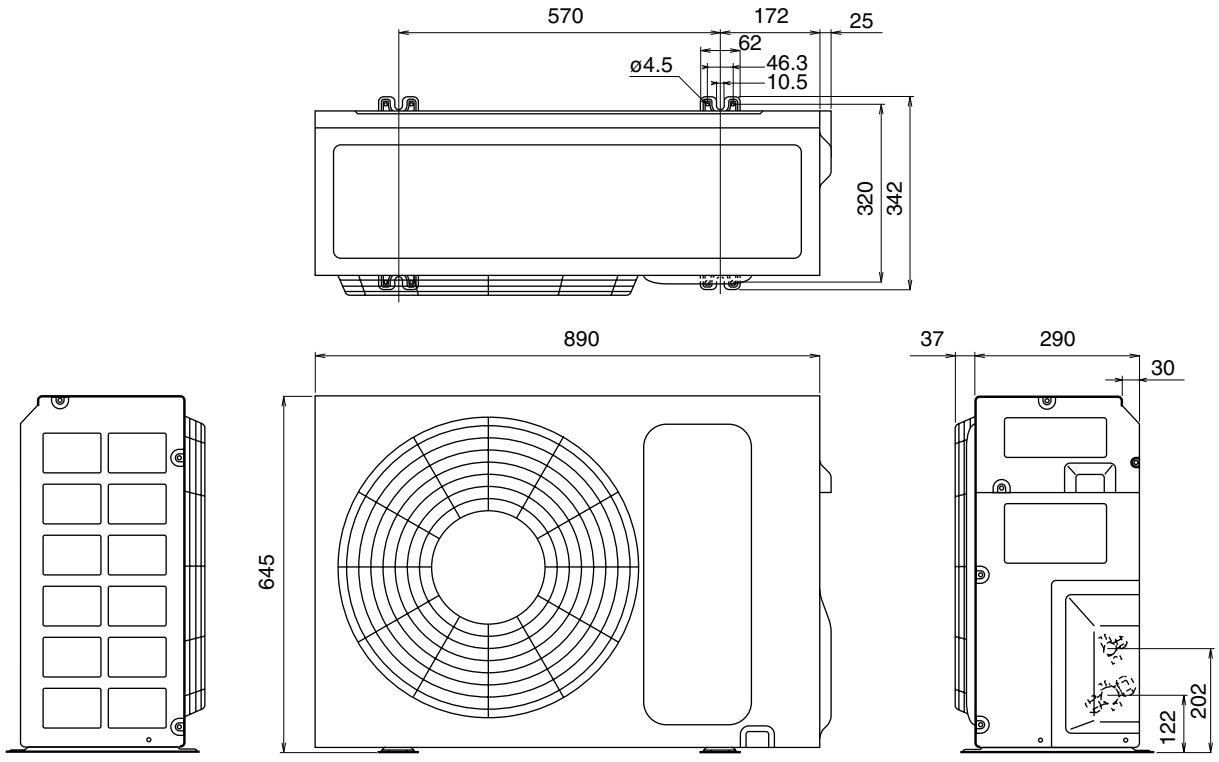


Figure E-2. OUTDOOR UNIT

WIRING DIAGRAMS

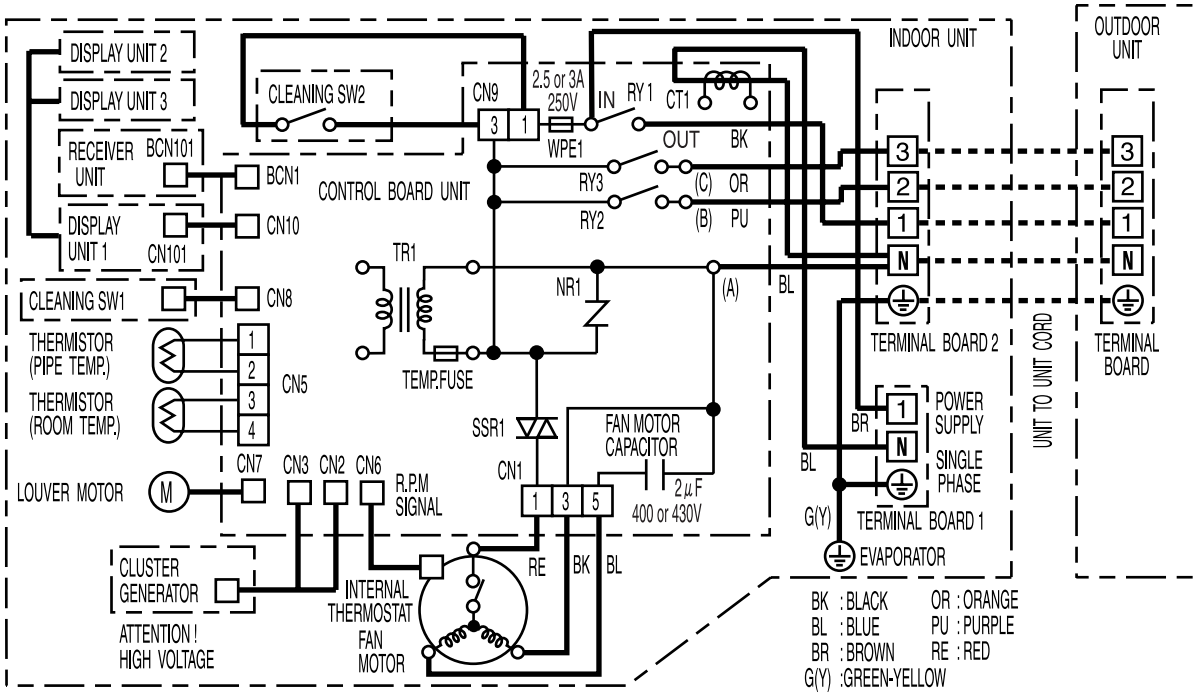


Figure W-1. Wiring Diagram for AY-AP18CE

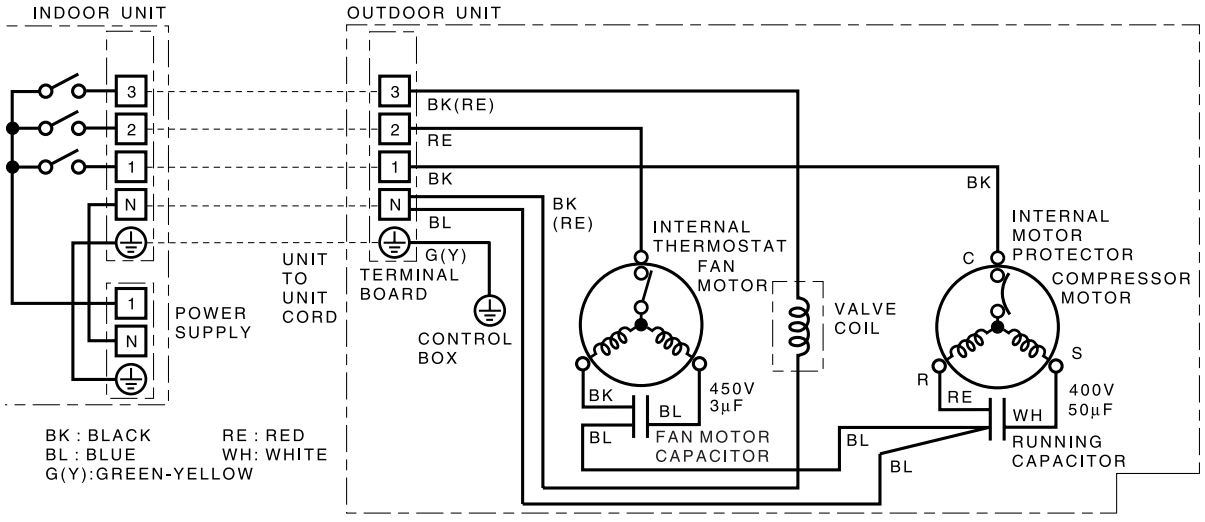


Figure W-2. Wiring Diagram for AE-A18CE

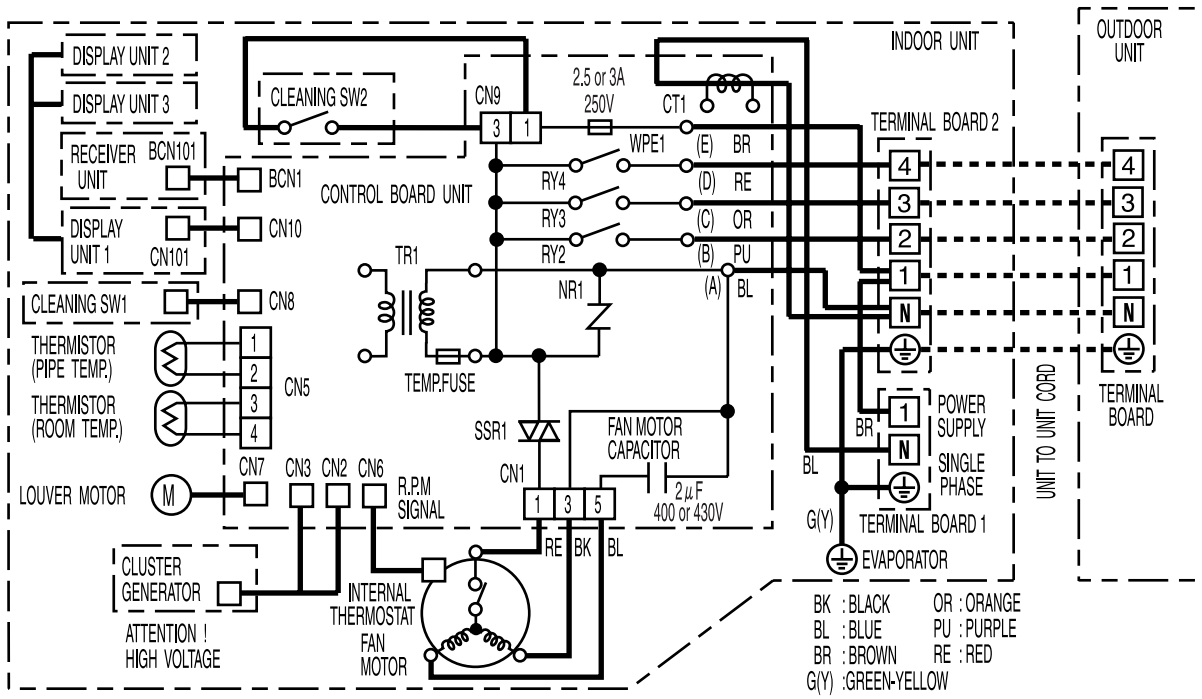


Figure W-3. Wiring Diagram for AY-AP24CE

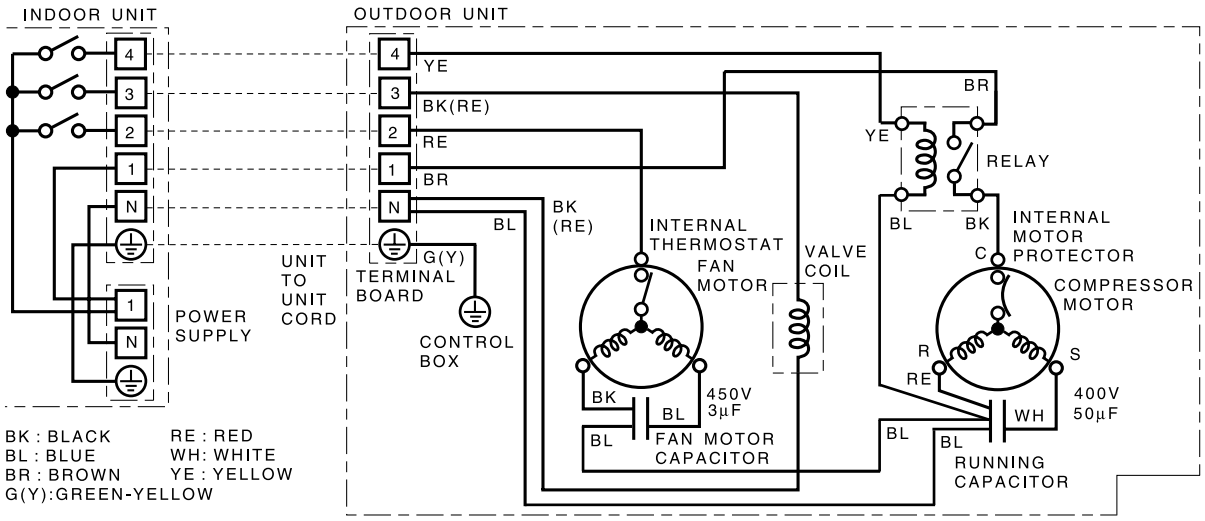


Figure W-4. Wiring Diagram for AE-A24CE

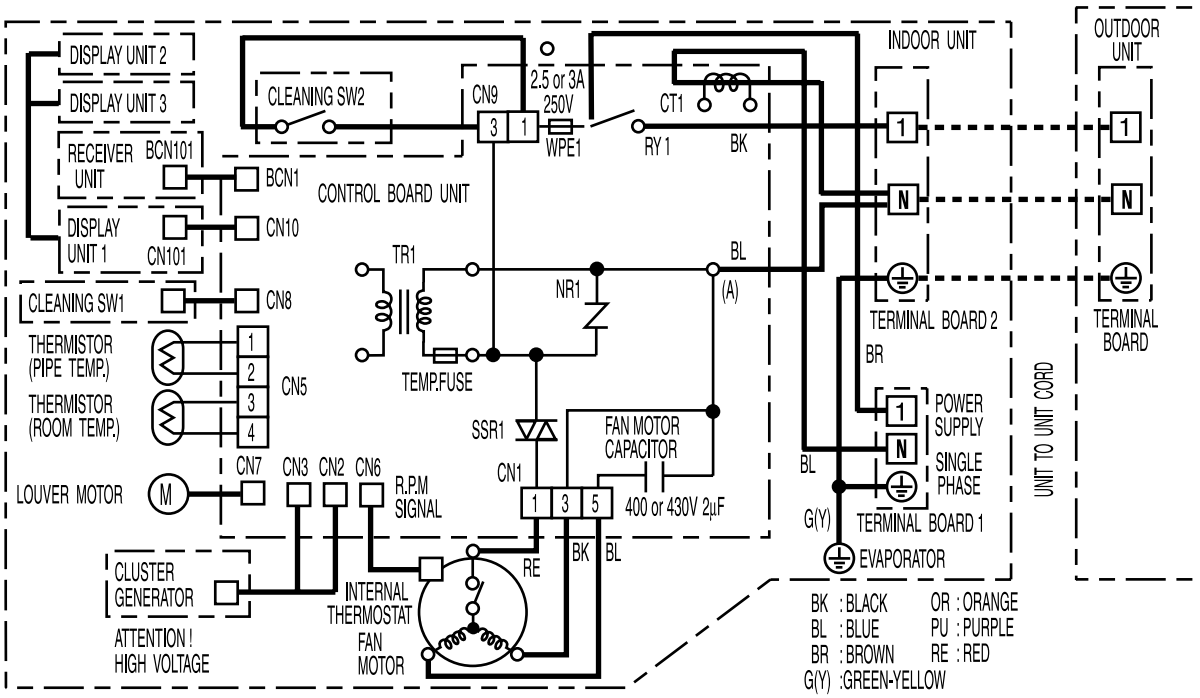


Figure W-5. Wiring Diagram for AH-AP18CE

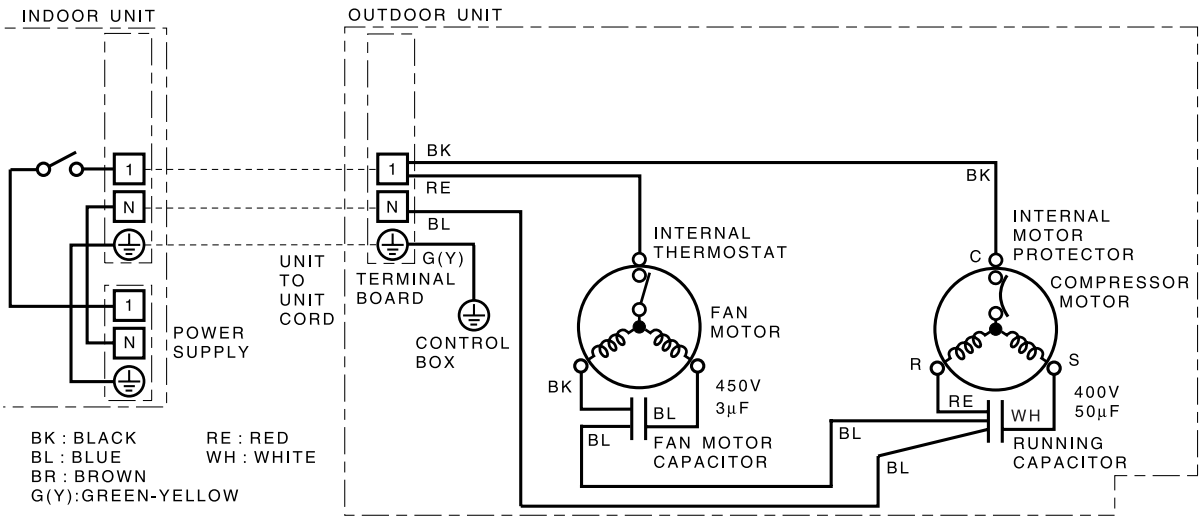


Figure W-6. Wiring Diagram for AU-A18CE

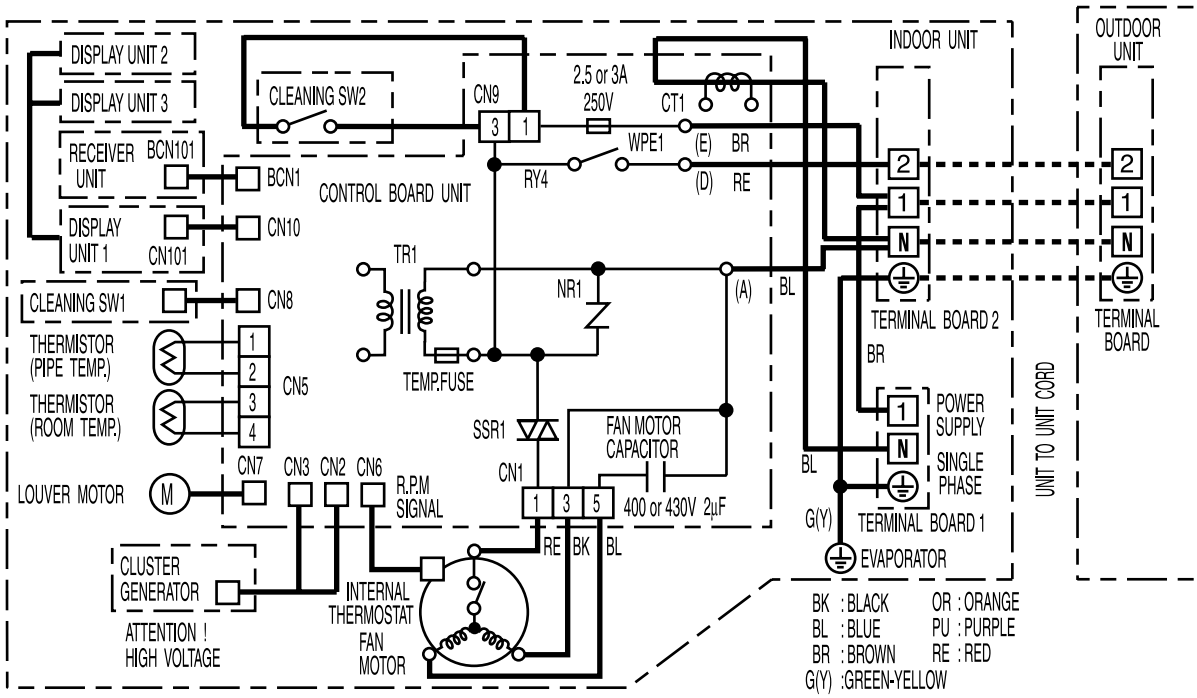


Figure W-7. Wiring Diagram for AH-A24CE

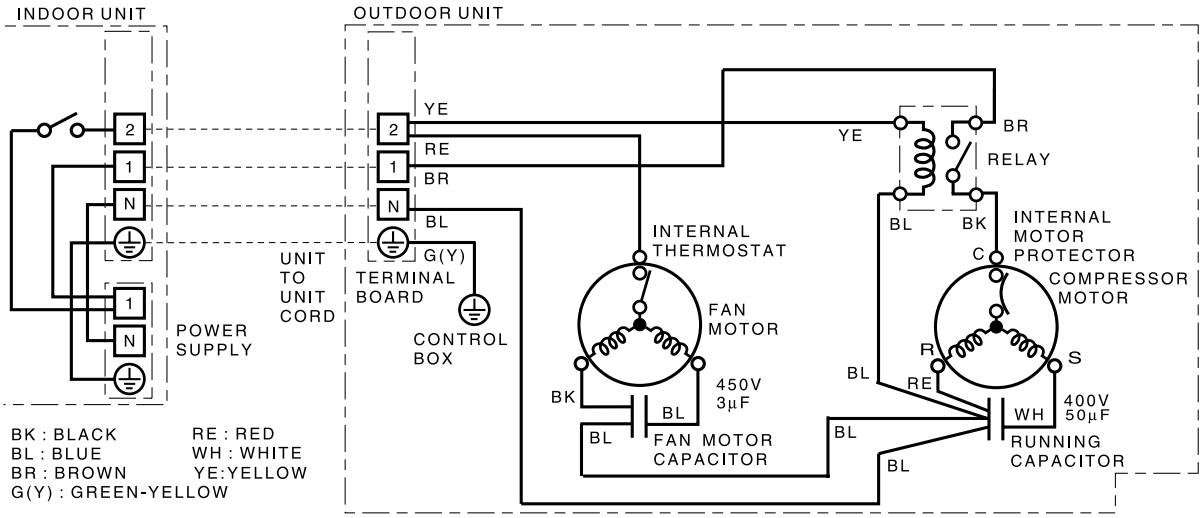


Figure W-8. Wiring Diagram for AU-A24CE

ELECTRICAL PARTS

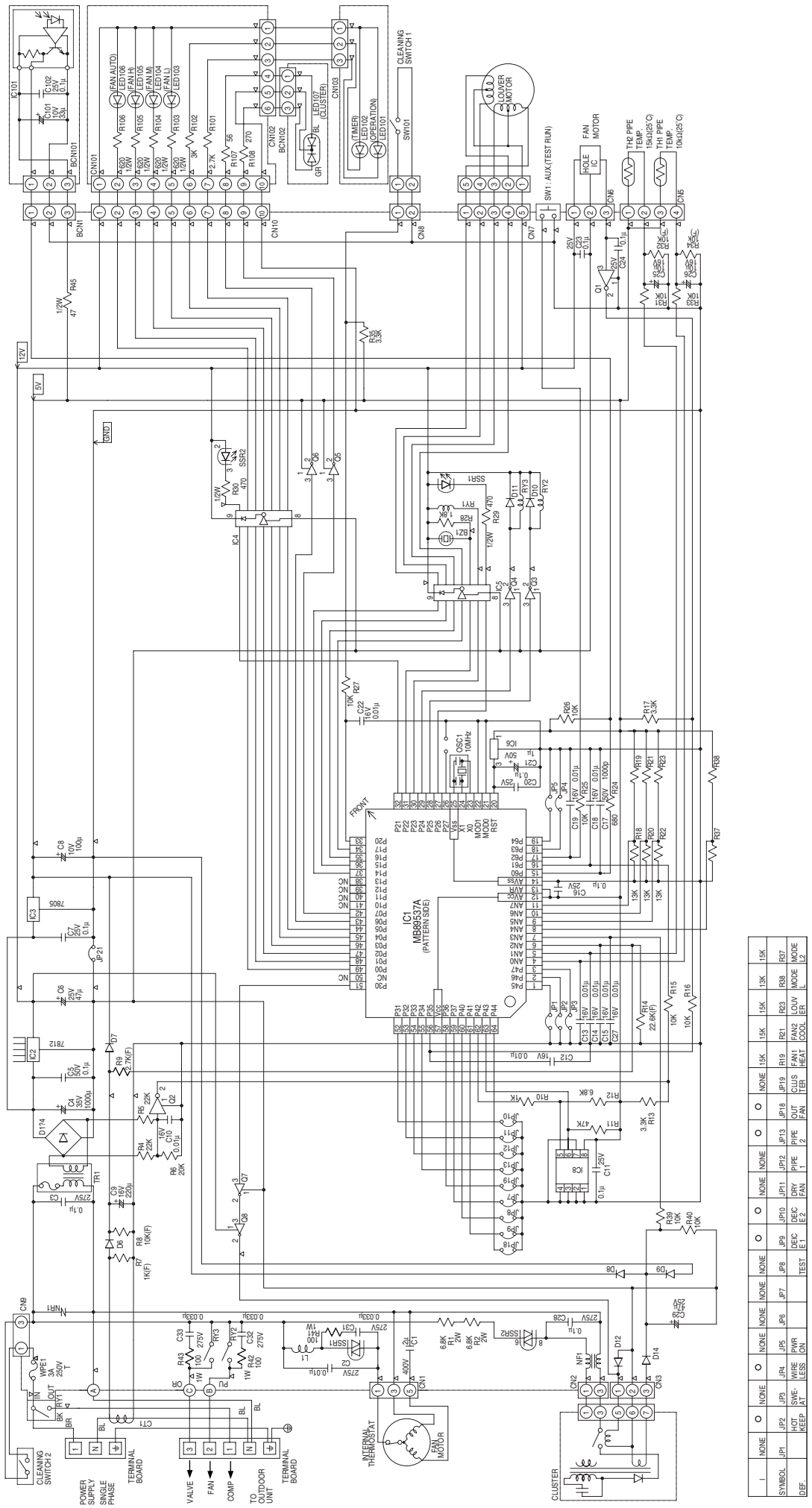
Part No.	Part Name	Items	Specifications	
			AY-AP18CE	AY-AP24CE
1	Terminal Board	Rating	300V 25A	
2	Fan motor Capacitor	Rating	400V 2μF	
3	Relay-1 (RY1)	Rating	AC250V 20A Coil Volt.; 12V	–
4	Relay-2 (RY2, RY3, RY4)	Rating	AC250V 3A Coil Volt.; 12V	
5	Printed Wiring Board	Material	Paper Base Phenolic Resin (UL 94V-0)	
6	Transformer	Rating	Pri 220 - 240VAC Sec. 19.0VDC	
7	Fan motor	Rating	220 - 240VAC 50Hz 41W 4-Pole	
		Type	MLA999	
		Thermal Protector (Internal)	Cut off 135±10˚C	
8	Power Supply Cord	Rating	3G 1.5mm^2	–
			H05VV-F	–
9	Louver Motor	Rating	DC12V	
		Type	MP24GA	

Part No.	Part Name	Items	Specifications	
			AE-A18CE	AE-A24CE
1	Terminal Board	Rating	300V 25A	
2	Fan motor Capacitor	Rating	450V 3μF	450V 3μF
3	Running Capacitor	Rating	400V 50μF	400V 50μF
4	Compessor	Rating	AC220 - 240V 50Hz 1500W	AC220 - 240V 50Hz 2200W
		Type	PH33VPET	2JS464D3AA02
5	Protector	Manufacturer	Ubukata Industries Co., Ltd.	TEXAS INSTRUMENTS
		Type	UP3QF0302-T09 (INTERNAL)	3HM529-36V
		Cutt off	130˚C	120˚C
6	Fan motor	Rating	220 - 240VAC 50Hz 71W 6-Pole	220 - 240VAC 50Hz 75W 6-Pole
		Type	MLB002	MLB015
		Thermal protector (Internal)	Cut off 135˚C±5˚C	
7	Relay 5 for Compressor	Rating	–	AC250V 30A Coil volt: 200 -240VAC

Part No.	Part Name	Items	Specifications	
			AH-AP18CE	AH-AP24CE
1	Terminal Board	Rating	300V 25A	
2	Fan motor Capacitor	Rating	400V 2μF	
3	Relay-1 (RY1)	Rating	AC250V 20A Coil Volt.; 12V	–
4	Relay-2 (RY4)	Rating	–	AC250V 5A Coil Volt.; 12V
5	Printed Wiring Board	Material	Paper Base Phenolic Resin (UL 94V-0)	
6	Transformer	Rating	Pri 220 - 240VAC Sec. 16.8V DC 0.29A	
7	Fan motor	Rating	220 - 240VAC 50Hz 41W 4-Pole	
		Type	MLA999	
		Thermal Protector (Internal)	Cut off 135±10˚C	
8	Power Supply Cord	Rating	3G 1.5mm^2	–
		Type	H05VV-F	–
9	Louver Motor	Rating	DC12V 250	
		Type	MP35EA	

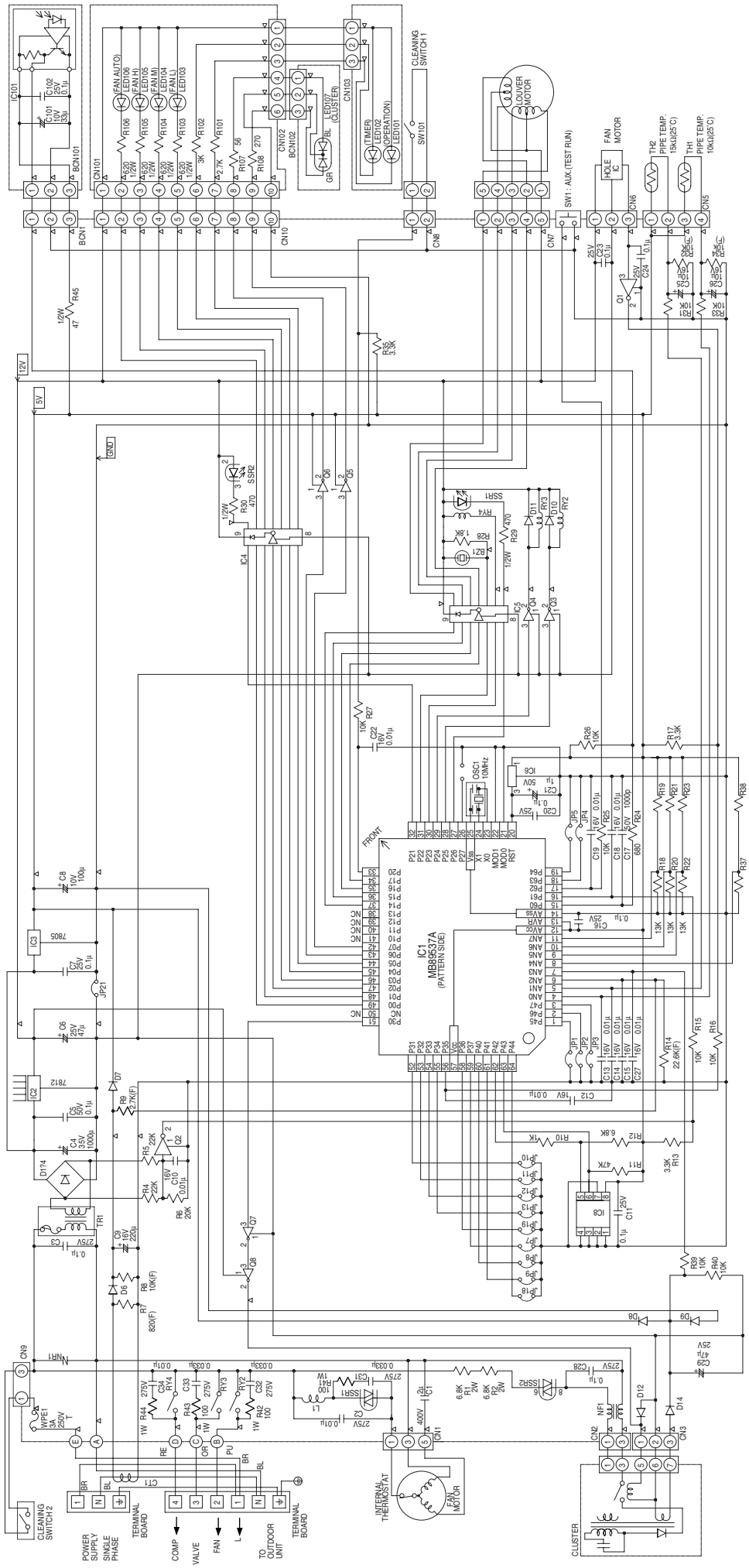
Part No.	Part Name	Items	Specifications	
			AU-A18CE	AU-A24CE
1	Terminal Board	Rating	300V 25A	
2	Fan motor Capacitor	Rating	450V 3μF	450V 3μF
3	Running Capacitor	Rating	400V 50μF	400V 50μF
4	Compessor	Rating	AC220 - 240V 50Hz 1500W	AC220 - 240V 50Hz 2200W
		Type	PH33VPET	2JS464D3AA02
5	Protector	Manufacturer	Ubukata Industries Co., Ltd.	TEXAS INSTRUMENTS
		Type	UP3QF0302-T09 (INTERNAL)	3HM529-36V
		Cutt off	130˚C	120˚C
6	Fan motor	Rating	220 - 240VAC 50Hz 71W 6-Pole	220 - 240VAC 50Hz 75W 6-Pole
		Type	MLB002	MLB015
		Thermal protector (Internal)	Cut off 135˚C±5˚C	
7	Relay 4	Rating	–	AC250V 30A Coil volt: 200 -240V

MICROCOMPUTER CONTROL SYSTEM

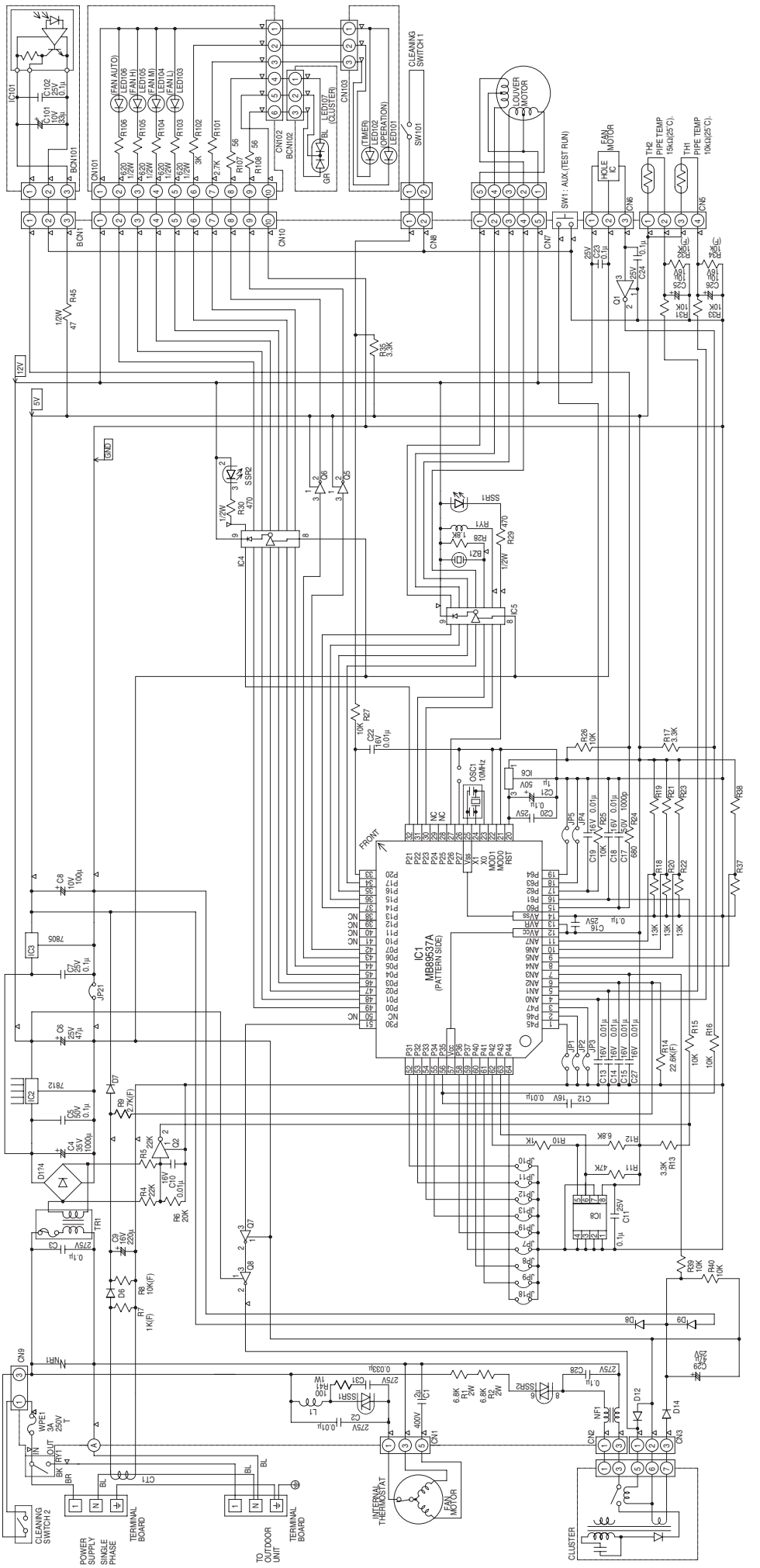


	1	JP1	JP2	JP3	JP4	JP5	JP6	JP7	JP8	JP9	JP10	JP11	JP12	JP13	JP18	JP19	R19	R21	R23	R38	R37
SYMBOL	NONE	NONE	O	NONE	O	NONE	NONE	NONE	NONE	O	O	NONE	NONE	O	O	NONE	15K	15K	15K	13K	15K
DIP.			HOT KEEP	SWE-AT	WIRE LESS	PWR ON			TEST	DEIC E1	DEIC E2	DRY FAN	PIPE 1	PIPE 2	OUT FAN	CLUS TER	FAN1 HEAT	FAN2 COOL	LOUV ER	MODE L	MODE L2

Figure L-1. Electronic Control Circuit Diagram for AY-AP18CE

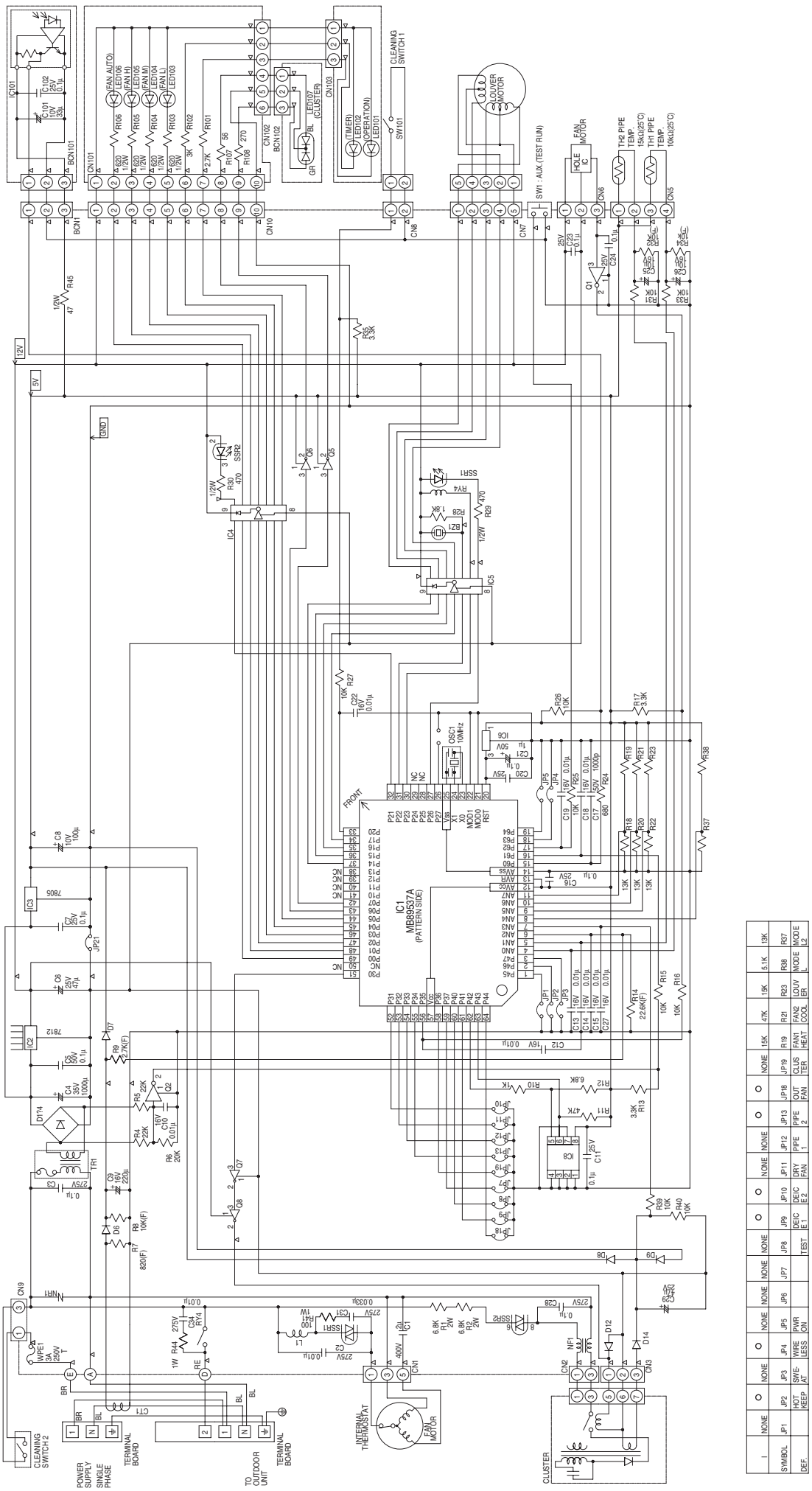

IC1
M88P537A
(PATTERN SIDE)
FRONT
POWER SUPPLY SINGLE PHASE
TERMINAL BOARD
COMP
VALVE
FAN
L
TO OUTDOOR UNIT
TERMINAL BOARD
CLEANING SWITCH 2
INTERNAL THERMOSTAT
FAN MOTOR
CLUSTER
CLEANING SWITCH 1
LOUVER MOTOR
FAN MOTOR
PIPE TEMP. 15kΩ(25°C)
PIPE TEMP. 10kΩ(25°C)
SW1: AUX. (TEST RUN)
OSC1 10MHz
12V
5V
GND

| | | |



I	NONE	○	○	NONE	○	○	○	NONE	NONE	NONE	NONE	NONE	NONE	15K	15K	9.1K	13K
SYMBOL	JP1	JP2	JP3	JP4	JP5	JP9	JP10	JP11	JP12	JP13	JP18	JP19	R19	R21	R23	R38	R37
DEF.		HOT KEEP	SWE-AT	WIRE LESS	PWR ON	DEIC E1	DEIC E2	DRY FAN	PIPE 1	PIPE 2	OUT FAN	CLUS TER	FAN1 HIGH	FAN2 COOL	LOUV ER	MODE L1	MODE L2

Figure L-3. Electronic Control Circuit Diagram for AH-AP18CE


IC1
MB89537A
(PATTERN SIDE)
CN1
CN2
CN3
CN5
CN6
CN7
CN8
CN9
CN10
CN101
CN102
CN103
BCN1
BCN101
BCN102
TRANSFORMER
TERMINAL BOARD
POWER SUPPLY SINGLE PHASE
TO OUTDOOR UNIT
INTERNAL THERMOSTAT
FAN MOTOR
CLUSTER
CLEANING SWITCH 2
CLEANING SWITCH 1
LOUVER MOTOR
SW1 : AUX.(TEST RUN)
THP PIPE TEMP. 15K/25°C)
THM PIPE TEMP. 10K/25°C)
FRONT
OSC1 10MHz
7805
7812
SSR1
SSR2

| | | |

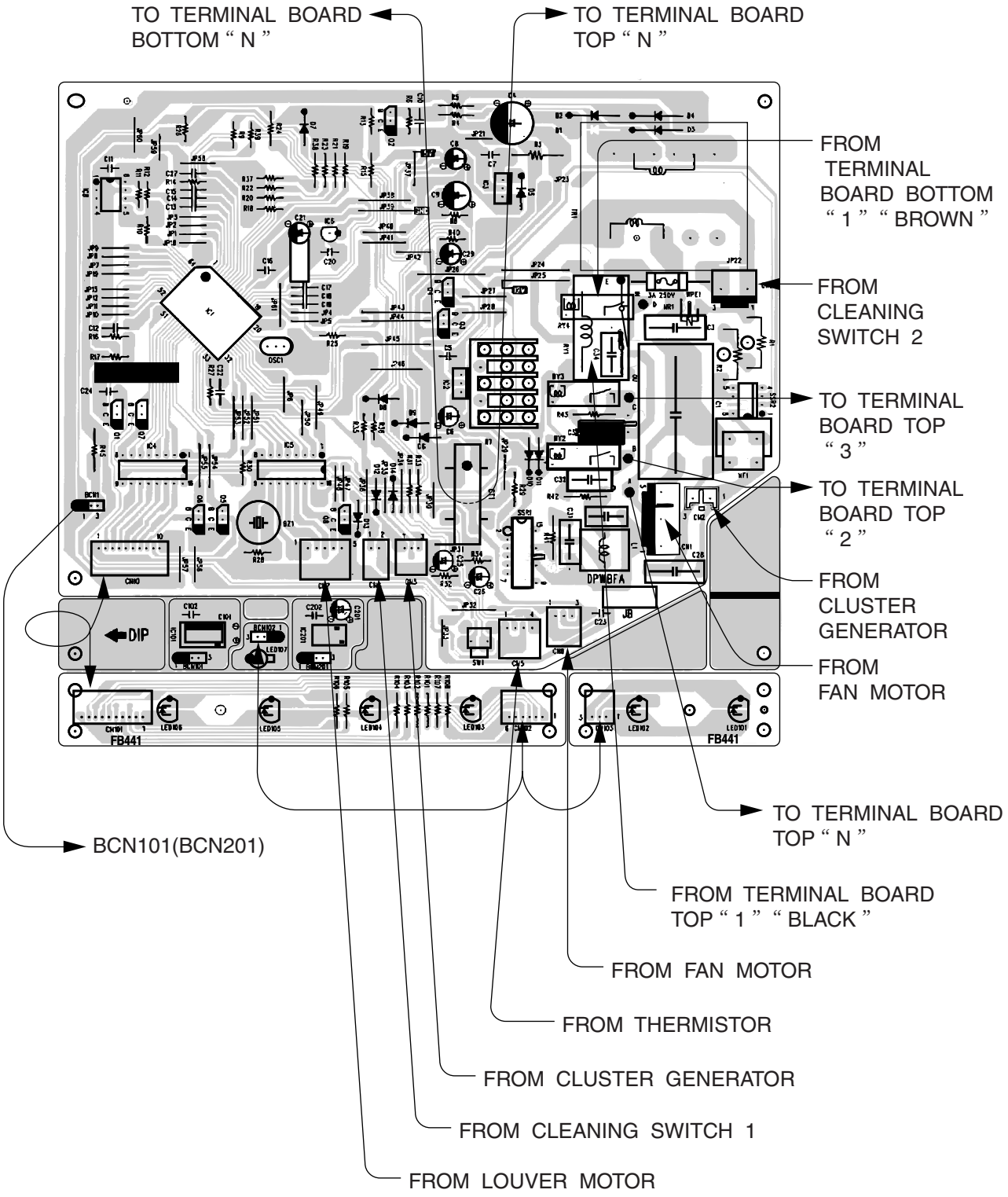

TO TERMINAL BOARD BOTTOM " N "
TO TERMINAL BOARD TOP " N "
FROM TERMINAL BOARD BOTTOM " 1 " " BROWN "
FROM CLEANING SWITCH 2
TO TERMINAL BOARD TOP " 3 "
TO TERMINAL BOARD TOP " 2 "
FROM CLUSTER GENERATOR
FROM FAN MOTOR
TO TERMINAL BOARD TOP " N "
FROM TERMINAL BOARD TOP " 1 " " BLACK "
FROM FAN MOTOR
FROM THERMISTOR
FROM CLUSTER GENERATOR
FROM CLEANING SWITCH 1
FROM LOUVER MOTOR
BCN101(BCN201)
DIP
FB441
FB441
DPWBFA

Figure L-5. Printed Wiring Diagram for AY-AP18CE

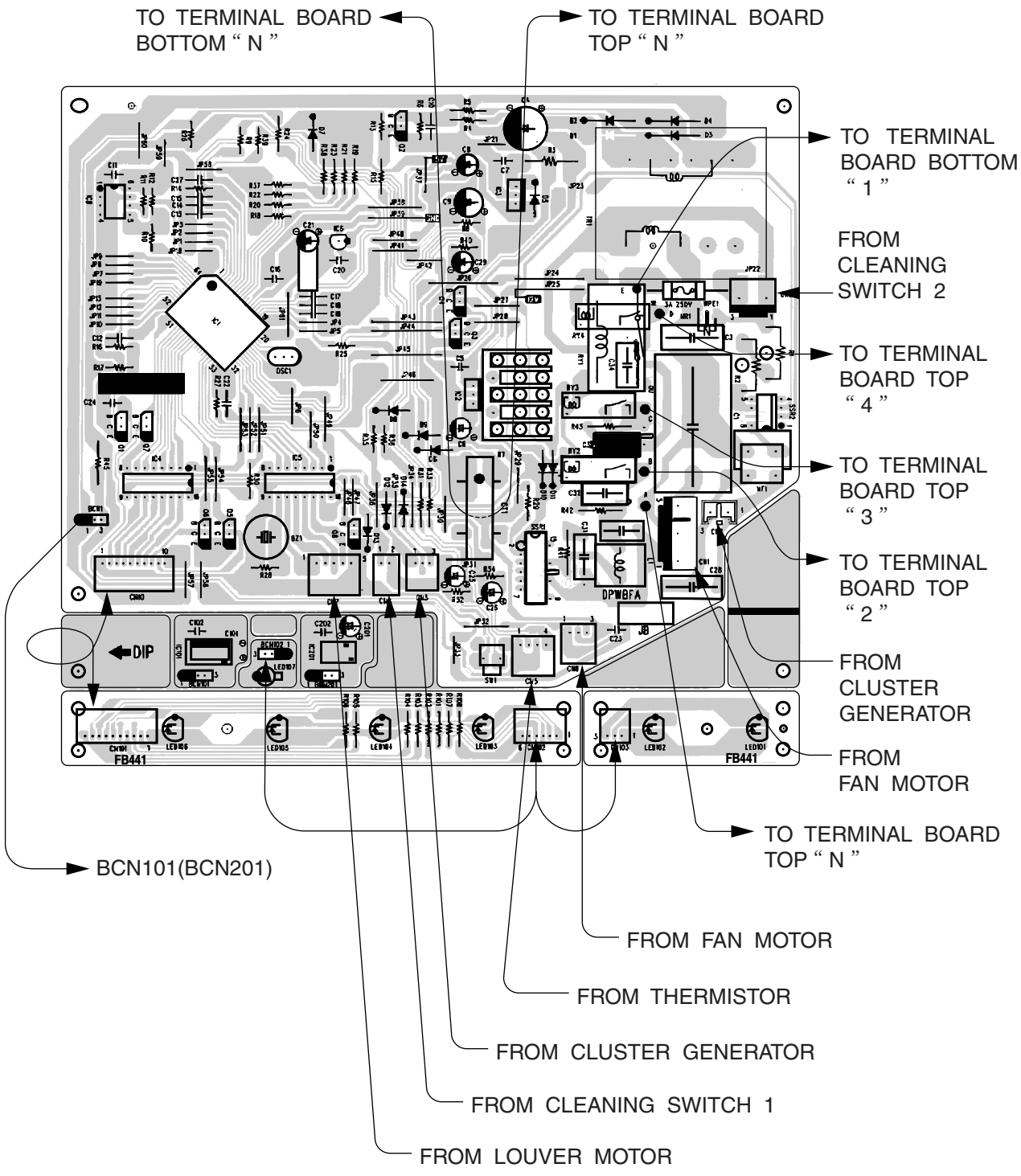

TO TERMINAL BOARD BOTTOM " N "
TO TERMINAL BOARD TOP " N "
TO TERMINAL BOARD BOTTOM " 1 "
FROM CLEANING SWITCH 2
TO TERMINAL BOARD TOP " 4 "
TO TERMINAL BOARD TOP " 3 "
TO TERMINAL BOARD TOP " 2 "
FROM CLUSTER GENERATOR
FROM FAN MOTOR
TO TERMINAL BOARD TOP " N "
BCN101(BCN201)
FROM FAN MOTOR
FROM THERMISTOR
FROM CLUSTER GENERATOR
FROM CLEANING SWITCH 1
FROM LOUVER MOTOR
DIP
DPWBFA
FB441
FB441

Figure L-6. Printed Wiring Diagram for AY-AP24CE

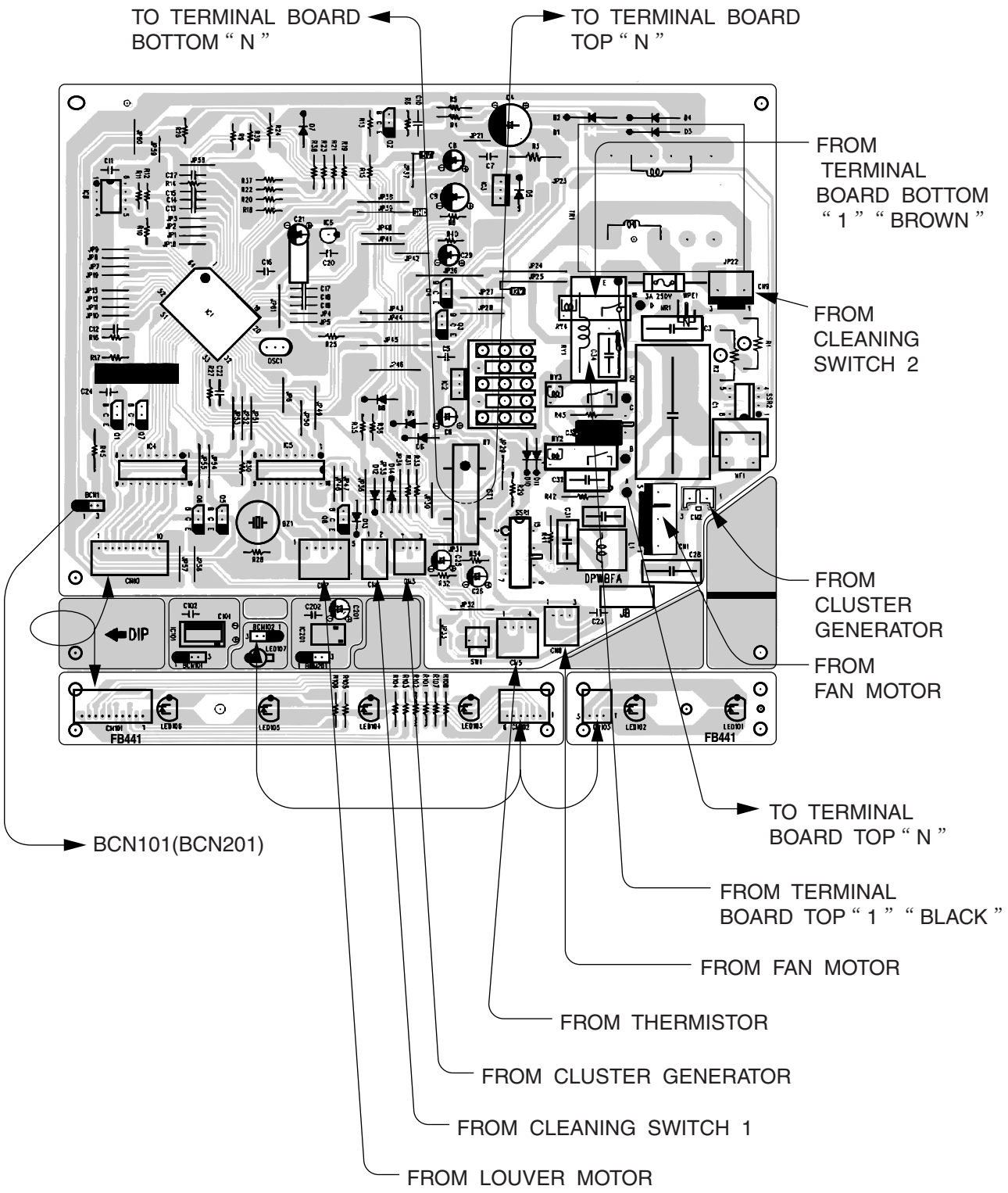

TO TERMINAL BOARD BOTTOM " N "
TO TERMINAL BOARD TOP " N "
FROM TERMINAL BOARD BOTTOM " 1 " " BROWN "
FROM CLEANING SWITCH 2
FROM CLUSTER GENERATOR
FROM FAN MOTOR
TO TERMINAL BOARD TOP " N "
FROM TERMINAL BOARD TOP " 1 " " BLACK "
FROM FAN MOTOR
FROM THERMISTOR
FROM CLUSTER GENERATOR
FROM CLEANING SWITCH 1
FROM LOUVER MOTOR
BCN101(BCN201)
DIP
FB441
FB441

Figure L-7. Printed Wiring Diagram for AH-AP18CE

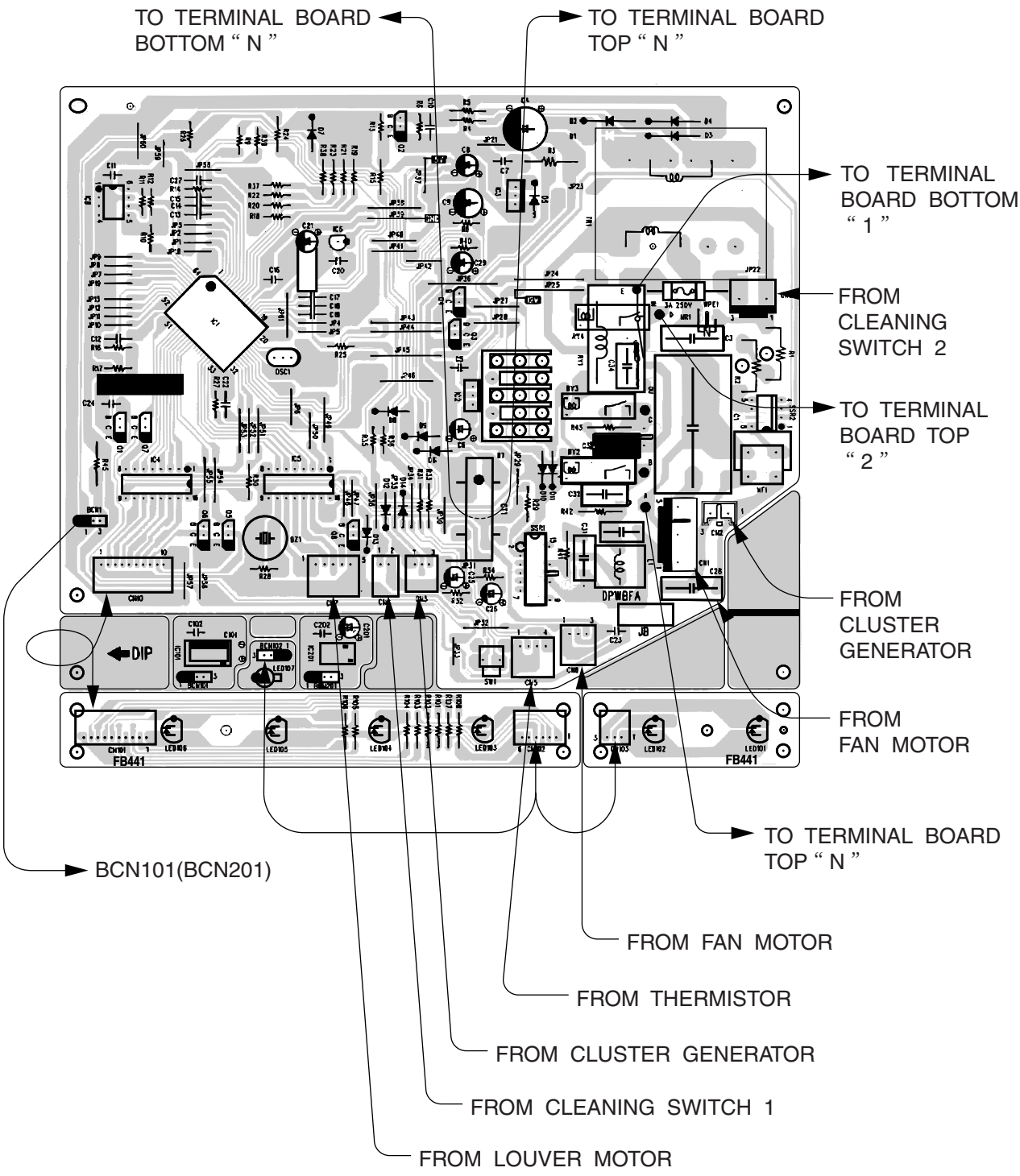


Figure L-8. Printed Wiring Diagram for AH-AP24CE

FUNCTIONS

AH-AP18CE/AP24CE are noty provided with the heating function

1. Temperature control characteristic

1-1 COOL operation

In the “COOL” mode, the thermostat circuit is controlled by four thermostat lines (C1 thru C5).

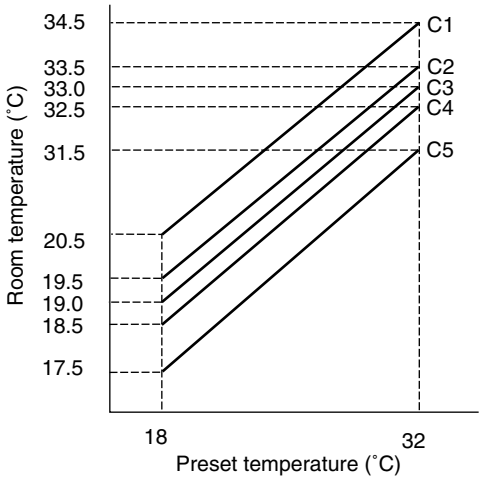


Figure Y-1

1-2 **DRY operation**

In the “DRY” mode, the thermostat circuit is controlled by three thermostat lines (D1 thru D3).

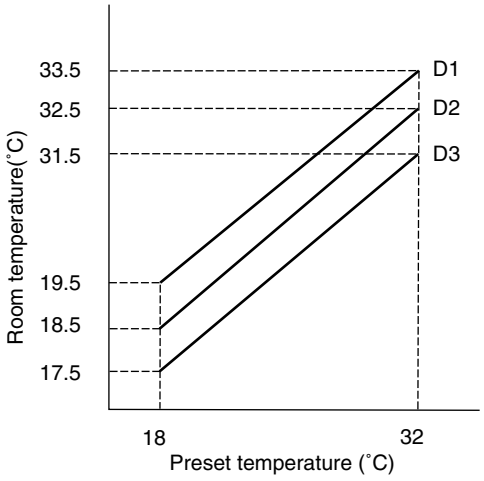


Figure Y-2

1-3 **HEAT operation**

In the “HEAT” mode, the thermostat circuit is controlled by six thermostat lines (H01 thru H4).

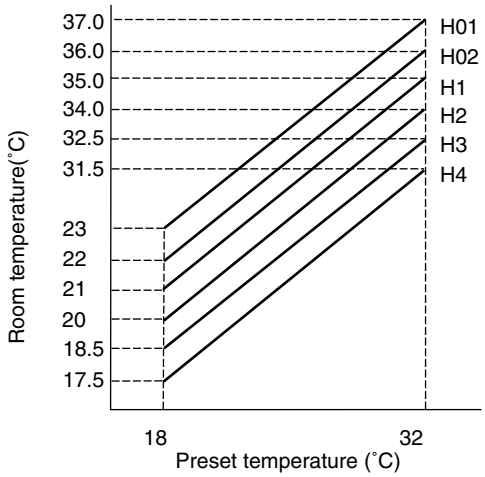


Figure Y-3

2. Operation modes

2-1 COOL operation

The compressor turns on or off, at the thermostat lines C3 and C4. The outdoor fan motor is also controlled with the compressor.

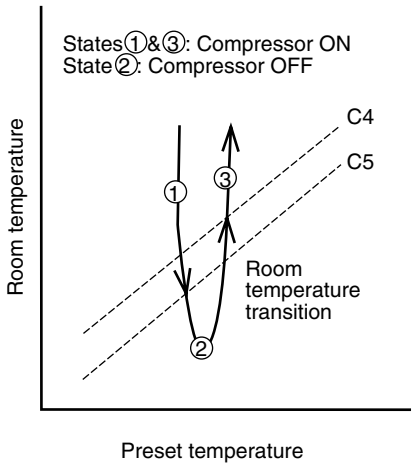


Figure Y-4

2-2 DRY operation

On the switch on, the compressor always starts to operate for 2 minutes with fan speed "DL" .
The microcomputer reads the room temperature 2 minutes after this first compressor operation.
This room temperature is set as the preset temperature automatically.
The preset temperature ranges from 18˚C to 32˚C. When the room temperature is below 18˚C, the preset temperature is set to 18˚C, and when the room temperature is over 32˚C, the preset temperature is set to 32˚C.
Dry operation is divided into three zones (Cooling zone, Dehumidifying zone and Circulating zone) by thermostat lines (D1 to D3), and the compressor and the fan motor are controlled in each zone as shown in Table Y-1.

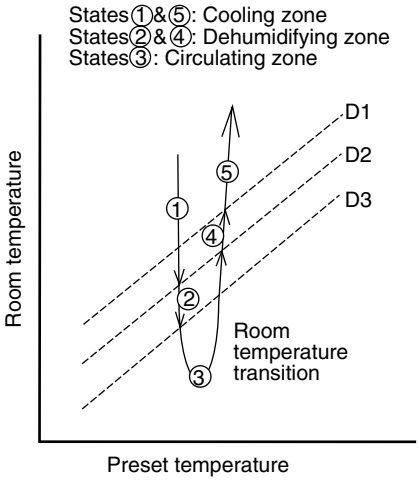


Figure Y-5

Table Y-1

	Compressor	Fan speed
Cooling zone	ON	"DH"
Dehumidifying zone	ON	"DL"
Circulating zone	OFF	"DL" or OFF

2-3 Heat operation

The compressor turns on or off, at State 2 , turns on continuously at State 1 & 3 .

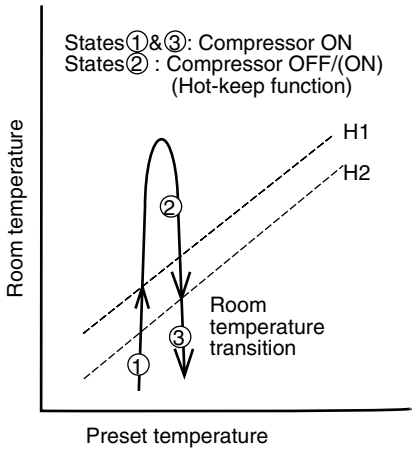


Figure Y-6

3. Fan speed

Fan speeds are given by the indoor fan motor, "DL"~"HH" which are available in the following operation mode.

Table Y-2

(r.p.m.)

Fan speed	Fan switch	Fan switch (AUTO)	18CE TYPE		24CE TYPE	
			AY	AH	AY	AH
DL	——	DRY	750	750	830	830
DH	——		780	780	860	860
CL	COOL SOFT	——	820	820	960	960
CAL	——	COOL	840	840	980	980
CM	COOL LOW		940	940	1030	1030
CAH	——		1000	1000	1120	1120
CH	COOL HIGH	——	1050	1050	1210	1210
HUL	——	——	720	——	730	——
HL	HEAT SOFT	——	840	——	930	——
HAL	——	HEAT	870	——	960	——
HM	HEAT LOW		940	——	1080	——
HAH	——		1010	——	1150	——
HH	HEAT HIGH	——	1050	——	1210	——

4. Hot-Keep

This function automatically controls the on-off operation of the indoor fan motor in accordance during the heating operation, thereby preventing the air conditioner from delivering a cold air when the compressor is off.

When the room temperature exceeds the thermostat line “H1”, the compressor is turned off, and the indoor fan motor is turned off after rotating at “HUL” for 30 seconds. 3 minutes and 10 seconds after turning off the compressor, the indoor fan motor is turned on for 3 minutes and 20 seconds. At 10 seconds after turning on the compressor, the indoor fan motor is turned on. The next compressor OFF time is for 3, 8 or more than 8 minutes according to the room temperature (the time increases with a rise of room temperature) when 3 minutes elapse after turning on the compessor.

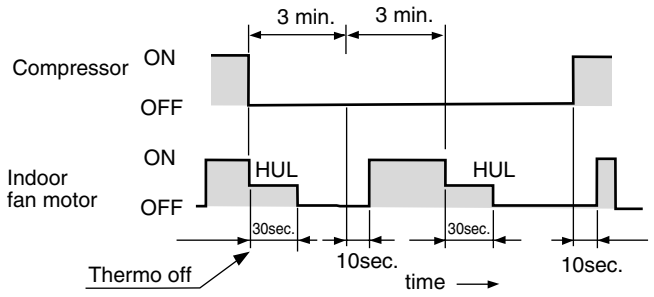


Figure Y-7

5. Preheat air flow

This function is intended to prevent cold air from being discharged when the heating operation starts or when defrosting.

When the indoor pipe temperature is below 29˚C at the begining of the heat operation or after defrosting, the indoor fan motor stays.

When the indoor pipe temperature gets higher than 29˚C, the fan motor is turned on at speed “HUL” after compensation of starting.

When the indoor pipe temperature exceeds 35˚C, the specified fan speed is restored. When the indoor pipe temperature falls below 30˚C, the fan speed shifts down to "HUL". And, when the indoor pipe temperature falls below 23˚C, the fan motor turns off. Then, over 29˚C , it turns on again at speed “HUL”.

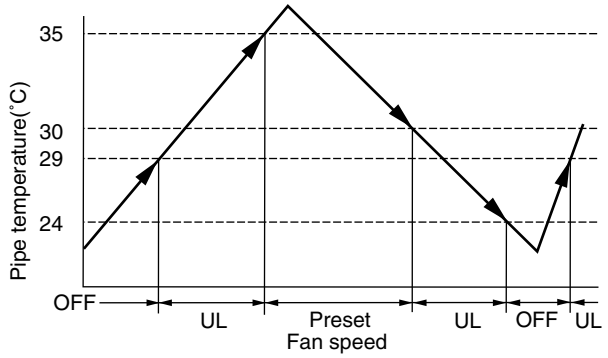
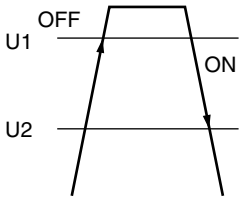


Figure Y-8

6. Overheating protection system

When overloading occurs during the heating operation, this system controls the outdoor fan motor according to the indoor pipe temperature to prevent the overloading of the compressor and restrain the rise in high pressure. When the indoor pipe temperature exceeds U1˚C, the outdoor fan motor is turned off, and when the indoor pipe temperature falls U2˚C, the outdoor fan motor turns on.



U1 and U2 are defferent by the time.
① within 3 minutes
③ over 3 minutes

Figure Y-9

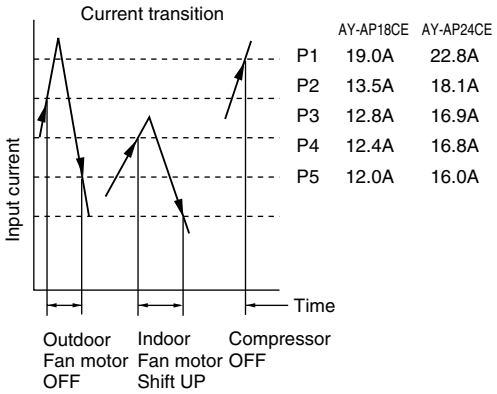
Table Y-3

MODELS	Fan / LIne	HH		HAH		HM	
		①	②	①	②	①	②
AY-AP24CE	U1	54˚C	54˚C	54˚C	54˚C	53˚C	53˚C
	U2	52˚C	53˚C	52˚C	53˚C	51˚C	52˚C
AY-AP18CE	U1	54˚C	54˚C	54˚C	54˚C	53˚C	53˚C
	U2	52˚C	53˚C	52˚C	53˚C	51˚C	52˚C

MODELS	Fan / LIne	HAL		HL		HUL	
		①	②	①	②	①	②
AY-AP24CE	U1	52˚C	52˚C	52˚C	52˚C	52˚C	52˚C
	U2	50˚C	51˚C	50˚C	51˚C	50˚C	51˚C
AY-AP18CE	U1	52˚C	52˚C	52˚C	52˚C	52˚C	52˚C
	U2	50˚C	51˚C	50˚C	51˚C	50˚C	51˚C

7. Current control

This system, in order to prevent overcurrent during heating operation, controls the outdoor fan motor and changes the indoor fan motor speed by detecting total current. When the current exceeds P2, the outdoor fan motor is automatically turned off, and when the current falls below P4, the outdoor fan motor is turned on.
When the current exceeds P3 and the indoor fan speed shifts down because of cold air (5. Preheat air flow), the changes in the indoor fan speed shifts up as follows, from "off" to "HUL", or from "HUL" to "HL". And when the current falls bellow P5, the indoor fan speed shift up is canceled.



	AY-AP18CE	AY-AP24CE
P1	19.0A	22.8A
P2	13.5A	18.1A
P3	12.8A	16.9A
P4	12.4A	16.8A
P5	12.0A	16.0A

Figure Y-10

8. Freeze preventive

When the indoor pipe temperature falls below 0˚C during cool operation or dry operation, the compressor is turned off.

9. Defrost

The defrost timer (integrating the operation time of compressor) counts time with microcomputer during heat operation.
Frost of outdoor pipe is estimated by indoor pipe temperature (TH2), room temperature (TH1), indoor fan speed and operation state of compressor.
In the defrost operation, first the compressor is turned off, the fan speed is set to “HUL” and the outdoor fan motor is turned off.
30 seconds later the indoor fan motor is turned off, 60 seconds later the reverse valve is turned off, and the compressor is turned on. In the end of defrosting, the compressor is turned off, the outdoor fan motor is turned on, 60 seconds later the reverse valve is turned on, and the compressor is turned on, starting heat operation. At this time, the indoor fan motor is turned off or the fan speed is set to “HUL” if preheat air flow function is effective.

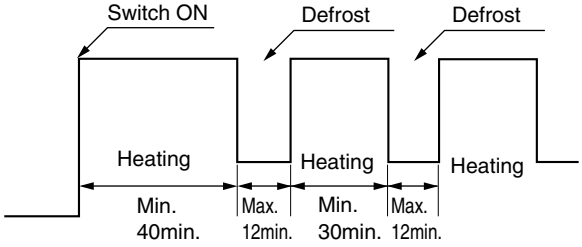


Figure Y-11

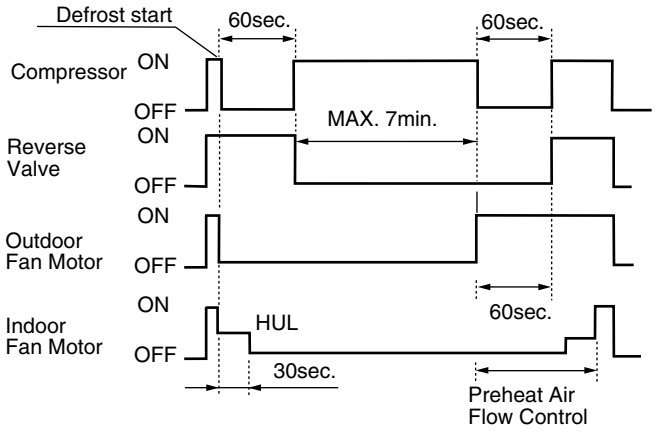


Figure Y-12

10. Delayed operation of the reverse valve

the heat operation is shut down or the operating mode is switched from heat to cool or dry, or vice versa, the reverse valve is switched after 3 minutes.

11. Test run

If the "AUX" button on the unit is pressed for 5 seconds or more during operation, cool test operation starts. The operation LED (red) flickers during test run.
To put the system in the heating test run mode, start the cooling operation and select the heating mode on the remote control. In cool and heat mode continuous compressor on operation is performed. In dry mode the operation is in dehumidifying zone. In fan only mode the indoor fan motor runs continusly.

12. Timer

12-1 ON/OFF TIMER

When the unit operates during one hour after the OFF-time is set, thermostat setting is automatically shifted (+1˚C in cool operation and dry operation, -3˚C in heat operation, 16˚C - 32˚C). When the ON-timer is set in heat operation and cool operation, operation starts before 0 to 30 minutes(depends on the room temperature) so that preset temperature is obtaind at set time.

12-2 ONE-HOUR TIMER

When ONE-HOUR timer is set, the unit turns off automatically after one hour. The one hour timer operation has priority over other time operation, such as the TIMER ON and TIMER OFF. If the ONE-HOUR TIMER button is pressed again during operation, the unit will operate additionally for another one hour.

13. Automatic air conditioning

automatic air conditioning is selected, the operation mode and preset temperature are set automatically according to the room temperature on starting operation.

Table Y-4

Room temperature at operation start	Operation Mode	Preset Temperature
Above 28˚C	COOL	26˚C
26˚C ~ 28˚C		25˚C
24˚C ~ 26˚C		24˚C
21˚C ~ 24˚C	DRY	Room temperature at operation start
Below 21˚C	HEAT	23˚C

When DRY mode is selected by the micro computer with AUTO operation, the fan speed lamps on the indoor unit panel will indicate identically with the fan speed symbols on the remote control dispaly, as the FAN speed setting is changed accordingly. Despite, the actual fan speed will not change, as it is determined automatically by the micro computer.

14. Automatic fan speed

When the automatic fan speed is selected in cool or heat operation, the fan speed is automatically changed by the thermostat lines C1 to C3 in cool operation, and H1 to H4 in heat operation.

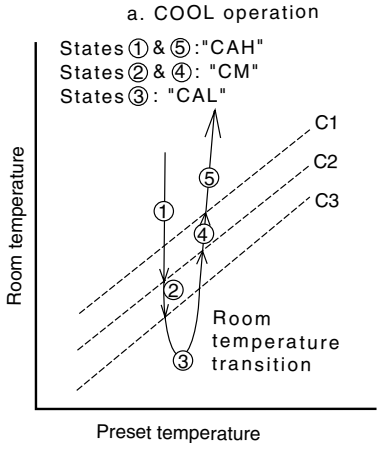


Figure Y-13

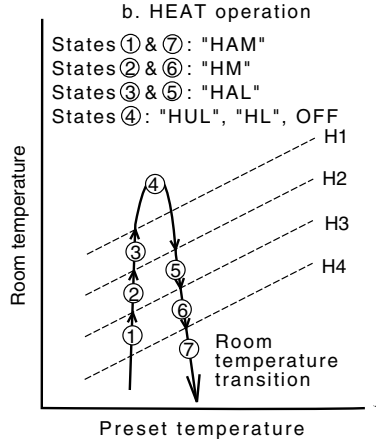


Figure Y-14

15. Outputs in each operation mode

Table Y-5

Mode		Compressor	Outdoor Fan Motor	Indoor Fan Motor	Valve Coil
COOL	Cooling	ON	ON	ON	OFF
	Circulating	OFF	OFF	ON	OFF
HEAT	Normal	ON	ON	ON	ON
		OFF	OFF	ON/UL/OFF	ON
	Preheat Air Flow Control	ON	ON	UL/OFF	ON
	ON Defrost	ON	OFF	OFF	OFF
DRY	Cooling	ON	ON	L/UL	OFF
	Dehumidiflying	ON	ON	UL/D	OFF
	Circulating	OFF	OFF	D/OFF	OFF

16. Power on start

If the connecting wire JP5 is shorten on the PWB ass'y, when the power is supplied by turning on a circuit breaker, the air conditioner automatically starts of operation in "AUTO".
(Refer to Figure L-5. ~ L-8. Printed Wiring Board.)

17. AUTO RESTART

Power failure occurs during operation, the unit will restart in the same operation mode as before after power recovery.

18. Test mode

Keep pushing the "AUX." buttons and supply the power, the system will go to the test mode. In this mode, the output of operation is switched by pushing the "AUX." button in the unit or the "OI" button in the remote controller. Normal outputs are shown in Table Y-6 and Y-7.

19. Plasma cluster

Plasma cluster ion mode
SSR2 : ON
Relay (Cluster unit inside) : OFF

Minus ion mode
SSR2 : ON
Relay (Cluster unit inside) : ON

※ 1) Cluster generator checking (STEP 1)

Timer LED (Yellow)	ON	OFF
Judgement	Normal (Generator OK)	Failure (Check circuit)

Table Y-6

AY-AP24CE

STEP No	Buzzer	Lamps											Cluster		Outdoor fan	4-way valve	Compressor	Indoor Fan	Louver
		RED		YELLOW		FAN SOFT		FAN LOW		FAN HIGH		FAN AUTO	CLUSTER	Power	Selector					
0	2	Room temp. 7~42°C	ON	Pipe temp. -2~45°C	ON	ON		ON		ON		ON	BLUE	OFF	OFF	OFF	OFF	OFF	OFF	OPEN
		~7°C , 42°C~	OFF	~-2°C , 45°C~	OFF															
1	1	FEED BACK CIRCUIT F L I C K		※1		CT INPUT(AN2 input voltage) 0.3V~4.5V	ON	~0.3V , 4.5V~	ON	0.3V~4.5V	ON	~0.3V , 4.5V~	BLUE	ON	OFF	ON	OFF	ON	1000 rpm	OPEN
						~0.3V , 4.5V~	OFF	0.3V~4.5V	OFF	~0.3V , 4.5V~	OFF	0.3V~4.5V								
2	1	Power On Start(JP5) ON		Wireless(JP4) OFF		MODEL SELECTION(AN4 input voltage) ON		OFF		ON		OFF	GREEN	ON	ON	OFF	ON	OFF		OFF
3	1	Sweat(JP3) ON		Hot Keep(JP2) OFF		OFF		ON		Cluster(JP19) ON		Dry Fan(JP11) ON	OFF	OFF	OFF	ON	OFF	OFF		OFF
4	1	DEICE 1 OFF		DEICE 2 OFF		Louver Collection(AN5 input voltage) OFF		ON		ON		ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF
5	1	Pipe 1 ON		Pipe 2 OFF		Cooling mode FAN speed Collection(AN6 input voltage) OFF		OFF		ON		ON	OFF	OFF	OFF	ON	OFF	OFF		OFF
6	1	E E P R O M ON		Micro SW OFF	ON	Heating mode FAN speed Collection(AN6 input voltage) OFF		ON		ON		ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF
				ON	OFF															
7	1	OFF		OFF		EEPROM VERSION(UPPER 4bit) OFF		OFF		OFF		OFF	OFF	OFF	OFF	ON	OFF	OFF		OFF
8	1	OFF		OFF		EEPROM VERSION(LOWER 4bit) OFF		OFF		OFF		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	CLOSE

AH-AP24CE

STEP No	Buzzer	Lamps											Cluster		Outdoor	Indoor Fan	Louver
		RED		YELLOW		FAN SOFT		FAN LOW		FAN HIGH		FAN AUTO	CLUSTER	Power	Selector			
0	2	Room temp. 7~42°C	ON	Pipe temp. -2~45°C	ON	ON		ON		ON		ON	BLUE	OFF	OFF	OFF	OFF	OPEN
		~7°C , 42°C~	OFF	~-2°C , 45°C~	OFF													
1	1	FEED BACK CIRCUIT F L I C K		※1		CT INPUT(AN2 input voltage) 0.3V~4.5V	ON	~0.3V , 4.5V~	ON	0.3V~4.5V	ON	~0.3V , 4.5V~	BLUE	ON	OFF	ON	1000 rpm	OPEN
						~0.3V , 4.5V~	OFF	0.3V~4.5V	OFF	~0.3V , 4.5V~	OFF	0.3V~4.5V						
2	1	Power On Start(JP5) ON		Wireless(JP4) OFF		MODEL SELECTION(AN4 input voltage) ON		OFF		ON		ON	GREEN	ON	ON	OFF		OFF
3	1	ON		Hot Keep(JP2) OFF		Out Fan(JP18) OFF		TEST(JP8) ON		Cluster(JP19) ON		Dry Fan(JP11) ON	OFF	OFF	OFF	OFF		OFF
4	1	OFF		DEICE 2 OFF		Louver Collection(AN5 input voltage) OFF		ON		ON		ON	OFF	OFF	OFF	OFF		OFF
5	1	ON		Pipe 2 OFF		Cooling mode FAN speed Collection(AN6 input voltage) OFF		OFF		ON		ON	OFF	OFF	OFF	OFF		OFF
6	1	E E P R O M ON		Micro SW OFF	ON	Heating mode FAN speed Collection(AN6 input voltage) OFF		ON		ON		ON	OFF	OFF	OFF	OFF		OFF
				ON	OFF													
7	1	OFF		OFF		EEPROM VERSION(UPPER 4bit) OFF		OFF		OFF		OFF	OFF	OFF	OFF	OFF		OFF
8	1	OFF		OFF		EEPROM VERSION(LOWER 4bit) OFF		OFF		OFF		OFF	OFF	OFF	OFF	OFF	OFF	CLOSE

Table Y-7

AY-AP18CE

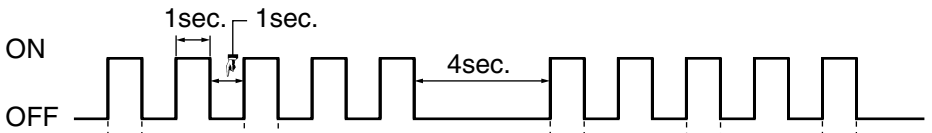
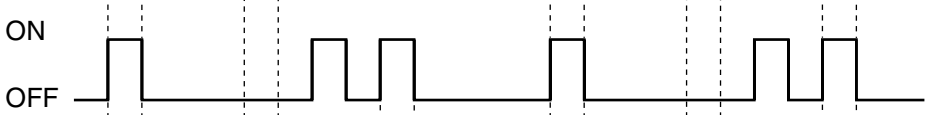
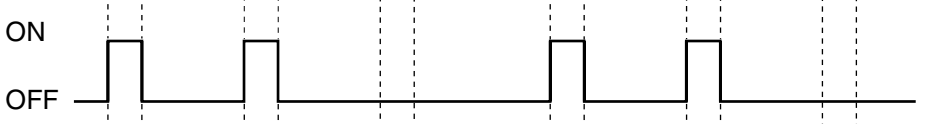
STEP No	Buzzer	Lamps							Cluster		Outdoor fan	4-way valve	Compressor	Indoor Fan	Louver
		RED	YELLOW	FAN SOFT	FAN LOW	FAN HIGH	FAN AUTO	CLUSTER	Power	Selector					
0	2	Room temp. 7~42˚C ON ~7˚C , 42˚C~ OFF	Pipe temp. -2~45˚C ON ~-2˚C , 45˚C~ OFF	ON	ON	ON	ON	BLUE	OFF	OFF	OFF	OFF	OFF	OFF	OPEN
1	1	FEED BACK CIRCUIT F L I C K	Claster(AN3 input voltage) ※1	CT INPUT(AN2 input voltage) 0.3V~4.5V ON ~0.3V , 4.5V~ OFF	~0.3V , 4.5V~ ON 0.3V~4.5V OFF	0.3V~4.5V ON ~0.3V , 4.5V~ OFF	~0.3V , 4.5V~ ON 0.3V~4.5V OFF	BLUE	ON	OFF	ON	OFF	ON	1000 rpm	OPEN
2	1	Power On Start(JP5) ON	Wireless(JP4) OFF	MODEL SELECTION(AN4 input voltage) ON	OFF	OFF	OFF	GREEN	ON	ON	OFF	ON	OFF		OFF
3	1	Sweat(JP3) ON	Hot Keep(JP2) OFF	Out Fan(JP18) OFF	TEST(JP8) ON	Cluster(JP19) ON	Dry Fan(JP11) ON	OFF	OFF	OFF	ON	OFF	OFF		OFF
4	1	DEICE 1 OFF	DEICE 2 OFF	Louver Collection(AN5 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF
5	1	Pipe 1 OFF	Pipe 2 OFF	Cooling mode FAN speed Collection(AN6 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF		OFF
6	1	E E P R O M ON	Micro SW OFF	Heating mode FAN speed Collection(AN6 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF		OFF
7	1	OFF	OFF	EEPROM VERSION(UPPER 4bit) OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF		OFF
8	1	OFF	OFF	EEPROM VERSION(LOWER 4bit) OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	CLOSE

AH-AP18CE

STEP No	Buzzer	Lamps							Cluster		Outdoor	Indoor Fan	Louver
		RED	YELLOW	FAN SOFT	FAN LOW	FAN HIGH	FAN AUTO	CLUSTER	Power	Selector			
0	2	Room temp. 7~42˚C ON ~7˚C , 42˚C~ OFF	Pipe temp. -2~45˚C ON ~-2˚C , 45˚C~ OFF	ON	ON	ON	ON	BLUE	OFF	OFF	OFF	OFF	OPEN
1	1	FEED BACK CIRCUIT F L I C K	Claster(AN3 input voltage) ※1	CT INPUT(AN2 input voltage) 0.3V~4.5V ON ~0.3V , 4.5V~ OFF	~0.3V , 4.5V~ ON 0.3V~4.5V OFF	0.3V~4.5V ON ~0.3V , 4.5V~ OFF	~0.3V , 4.5V~ ON 0.3V~4.5V OFF	BLUE	ON	OFF	ON	1000 rpm	OPEN
2	1	Power On Start(JP5)	Wireless(JP4) OFF	MODEL SELECTION(AN4 input voltage) ON	OFF	OFF	ON	GREEN	ON	ON	OFF		OFF
3	1	Sweat(JP3)	Hot Keep(JP2) OFF	Out Fan(JP18) OFF	TEST(JP8) ON	Cluster(JP19) ON	Dry Fan(JP11) ON	OFF	OFF	OFF	OFF		OFF
4	1	DEICE 1	DEICE 2 OFF	Louver Collection(AN5 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF
5	1	Pipe 1	Pipe 2 OFF	Cooling mode FAN speed Collection(AN6 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF
6	1	E E P R O M ON	Micro SW OFF ON ON OFF	Heating mode FAN speed Collection(AN6 input voltage) OFF	ON	ON	ON	OFF	OFF	OFF	OFF		OFF
7	1	OFF	OFF	EEPROM VERSION(UPPER 4bit) OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF		OFF
8	1	OFF	OFF	EEPROM VERSION(LOWER 4bit) OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	CLOSE

20. Diagnosis procedure

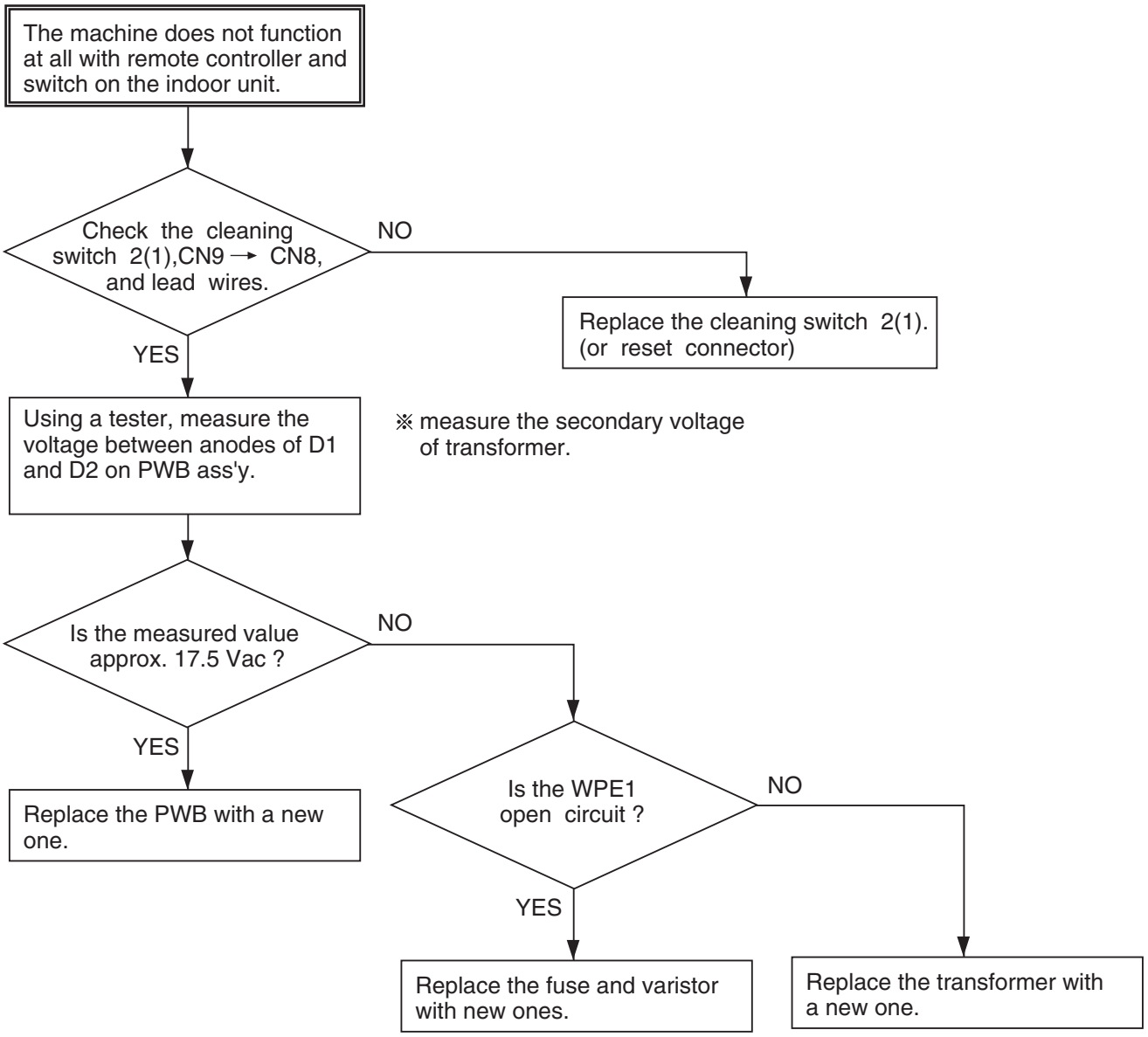
When indoor fan motor is out of order or compressor lock occurs, the compressor, indoor fan motor, outdoor fan motor, and louver are all stopped and the operation LED(red) turns on or off synchronously with the timimg of the timer LED.
When the thermistor for room temperature or pipe temperature is open or short state, the operation LED turns on or off synchronously with the timing of the timer LED by pushing continously for more than 5 seconds "AUX." button during suspension of operation.

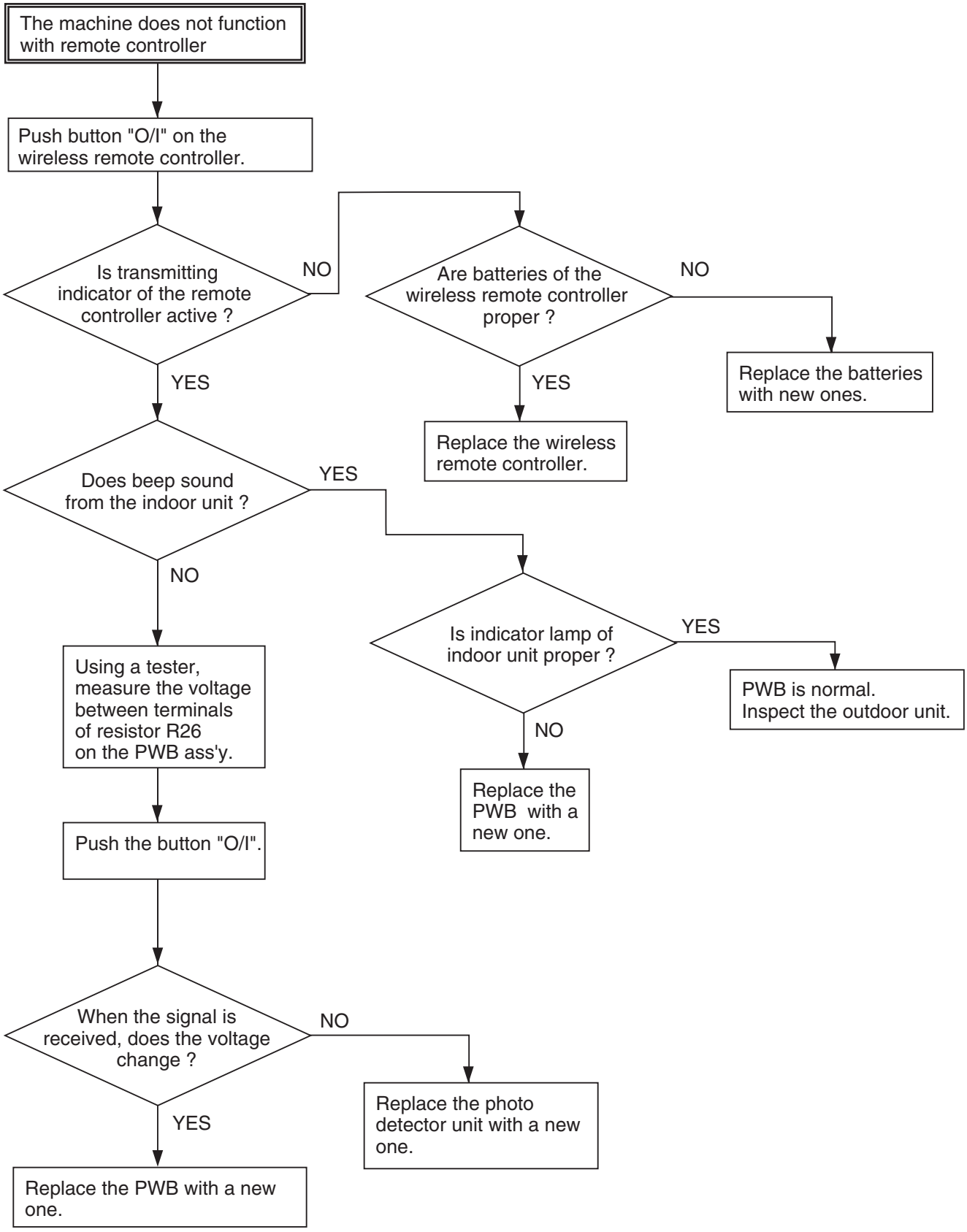
	Timer LED	
Indoor fan motor	Operation LED	
Comp.-lock	Operation LED	
Thermistor short state	Operation LED	
Thermistor open state	Operation LED	

Timing chart of Timer LED and Operation LED of DIAGNOSIS PROCEDURE.
When "OI" button the remote controller or "AUX." button in the unit is pushed, the unit is free from DIAGNOSIS PROCEDURE.

When the louver unit is not properly installed, all lamps on the indicator panel will blink, operation are all stop and Remote signal is not accept.

TROUBLESHOOTING GUIDE OF CONTROL CIRCUIT


The machine does not function at all with remote controller and switch on the indoor unit.
Check the cleaning switch 2(1),CN9 → CN8, and lead wires.
NO
Replace the cleaning switch 2(1). (or reset connector)
YES
Using a tester, measure the voltage between anodes of D1 and D2 on PWB ass'y.
※ measure the secondary voltage of transformer.
Is the measured value approx. 17.5 Vac ?
NO
YES
Replace the PWB with a new one.
Is the WPE1 open circuit ?
NO
YES
Replace the fuse and varistor with new ones.
Replace the transformer with a new one.


The machine does not function with remote controller
Push button "O/I" on the wireless remote controller.
Is transmitting indicator of the remote controller active ?
NO
YES
Are batteries of the wireless remote controller proper ?
NO
YES
Replace the batteries with new ones.
Replace the wireless remote controller.
Does beep sound from the indoor unit ?
YES
NO
Is indicator lamp of indoor unit proper ?
YES
NO
PWB is normal. Inspect the outdoor unit.
Replace the PWB with a new one.
Using a tester, measure the voltage between terminals of resistor R26 on the PWB ass'y.
Push the button "O/I".
When the signal is received, does the voltage change ?
NO
YES
Replace the photo detector unit with a new one.
Replace the PWB with a new one.

For AY-AP18CE/AE-A18CE, AH-AP18CE/AU-A18CE

The room is not cooled at all or not cooled.
The compressor does not operate.

↓

Push the button "AUX." on the indoor unit, for more than 5 sec.

↓

Using a tester, measure voltage at the terminals on the terminal board.

↓

Is the voltage between terminal "N" and "1" of the terminal board the power supply voltage ?

NO → Measure resistances of TH1 and TH2.

YES ↓

Are the resistances conformed Fig. 1 ?

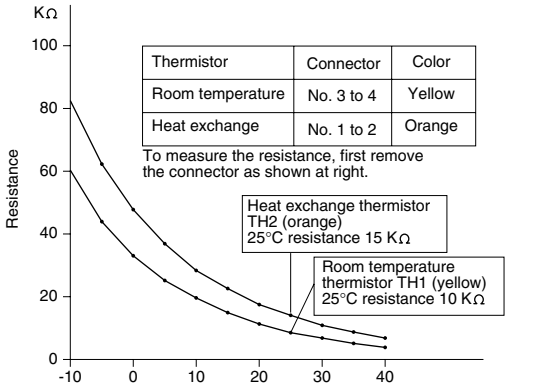
NO → Replace the thermistor ass'y with a new one.

YES ↓

Replace the PWB ass'y with a new one.

The control circuit is normal.
- The compressor may be defective.
- The running capacitor may be defective.
- Refrigerant may be leaked.
- The outdoor fan motor may be defective.
- The outdoor fan motor capacitor may be defective.

Fig. 1 Temperature properties of indoor thermistors



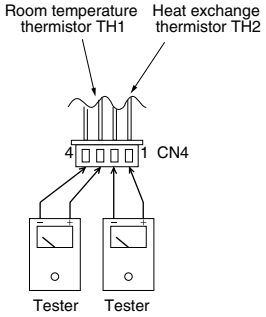
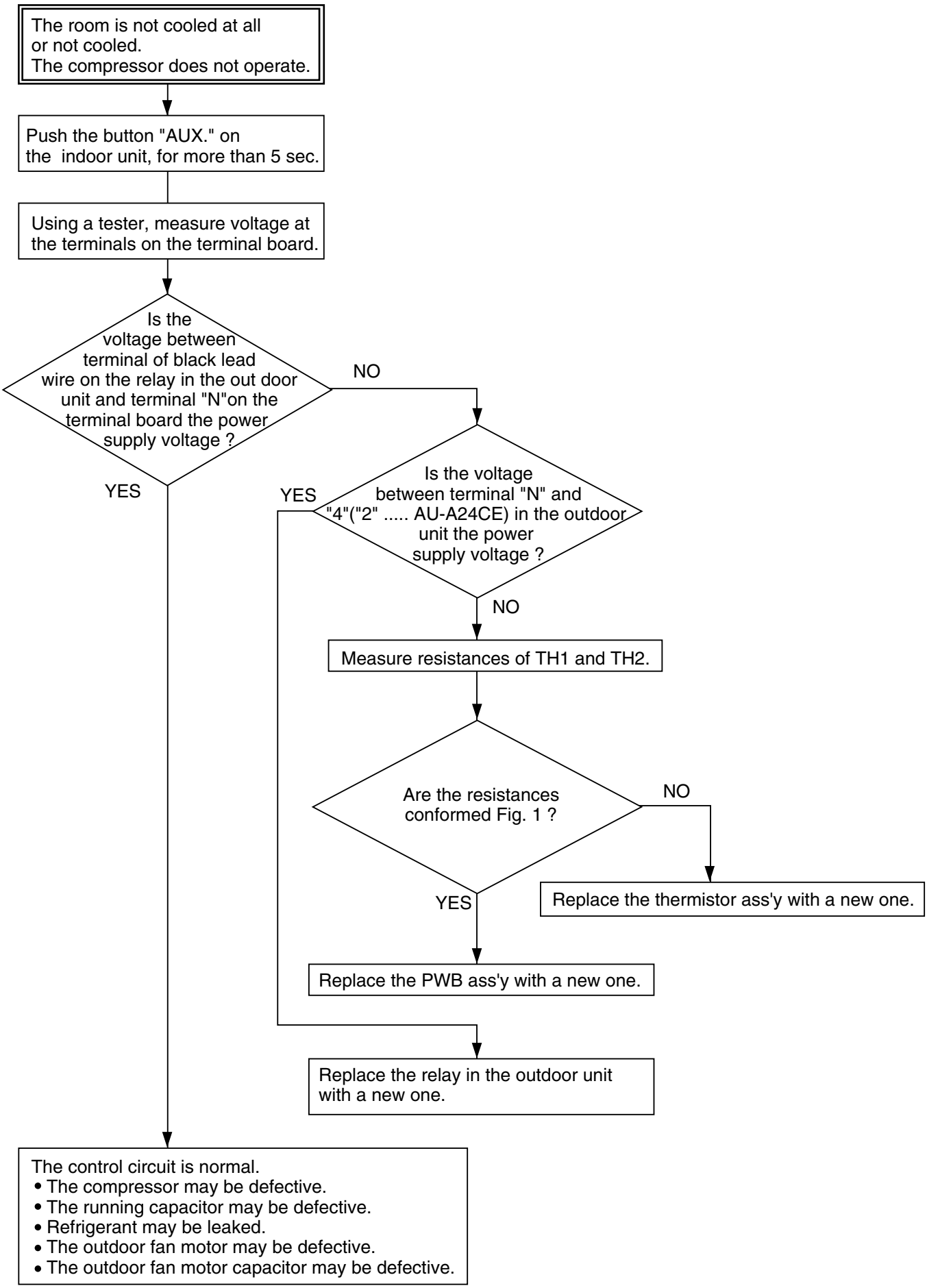
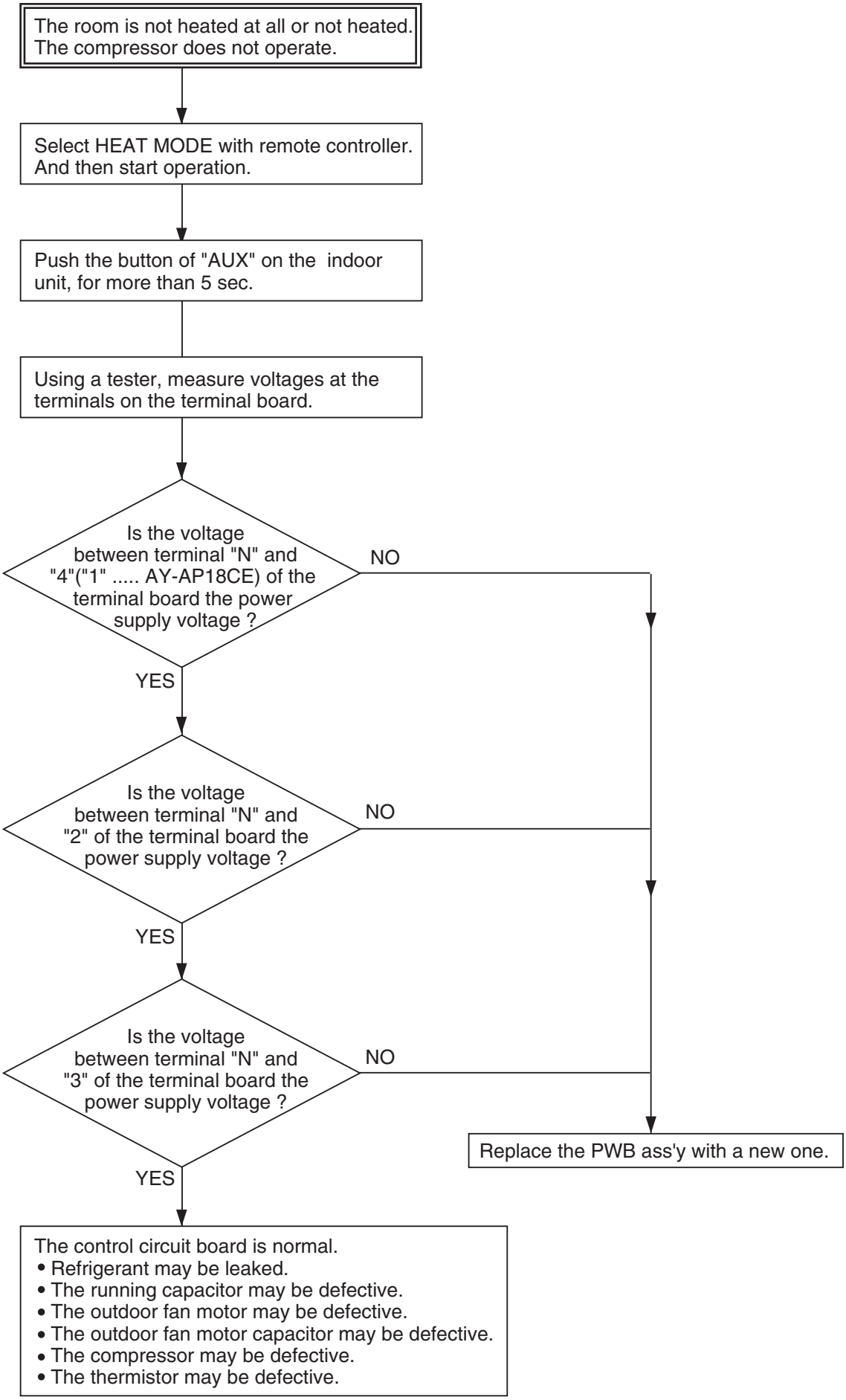


Fig. 1

For AY-AP24CE/AE-A24CE, AH-AP24CE/AU-A24CE


The room is not cooled at all or not cooled. The compressor does not operate.
Push the button "AUX." on the indoor unit, for more than 5 sec.
Using a tester, measure voltage at the terminals on the terminal board.
Is the voltage between terminal of black lead wire on the relay in the out door unit and terminal "N"on the terminal board the power supply voltage ?
NO
YES
Is the voltage between terminal "N" and "4"("2" ..... AU-A24CE) in the outdoor unit the power supply voltage ?
YES
NO
Measure resistances of TH1 and TH2.
Are the resistances conformed Fig. 1 ?
NO
YES
Replace the thermistor ass'y with a new one.
Replace the PWB ass'y with a new one.
Replace the relay in the outdoor unit with a new one.
The control circuit is normal.
• The compressor may be defective.
• The running capacitor may be defective.
• Refrigerant may be leaked.
• The outdoor fan motor may be defective.
• The outdoor fan motor capacitor may be defective.

For AY-AP24CE/AE-A24CE, AY-AP18CE/AE-A18CE


The room is not heated at all or not heated.
The compressor does not operate.
Select HEAT MODE with remote controller.
And then start operation.
Push the button of "AUX" on the indoor unit, for more than 5 sec.
Using a tester, measure voltages at the terminals on the terminal board.
Is the voltage between terminal "N" and "4"("1" ..... AY-AP18CE) of the terminal board the power supply voltage ?
NO
YES
Is the voltage between terminal "N" and "2" of the terminal board the power supply voltage ?
NO
YES
Is the voltage between terminal "N" and "3" of the terminal board the power supply voltage ?
NO
YES
Replace the PWB ass'y with a new one.
The control circuit board is normal.
• Refrigerant may be leaked.
• The running capacitor may be defective.
• The outdoor fan motor may be defective.
• The outdoor fan motor capacitor may be defective.
• The compressor may be defective.
• The thermistor may be defective.

REFRIGERATION CYCLE

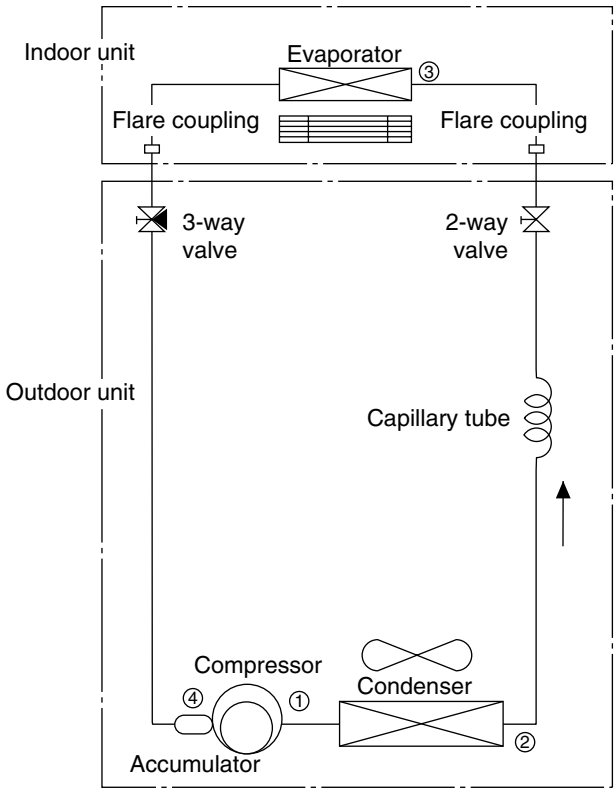


Figure R-1. Refrigeration Cycle for AH-AP18CE/AH-AP24CE

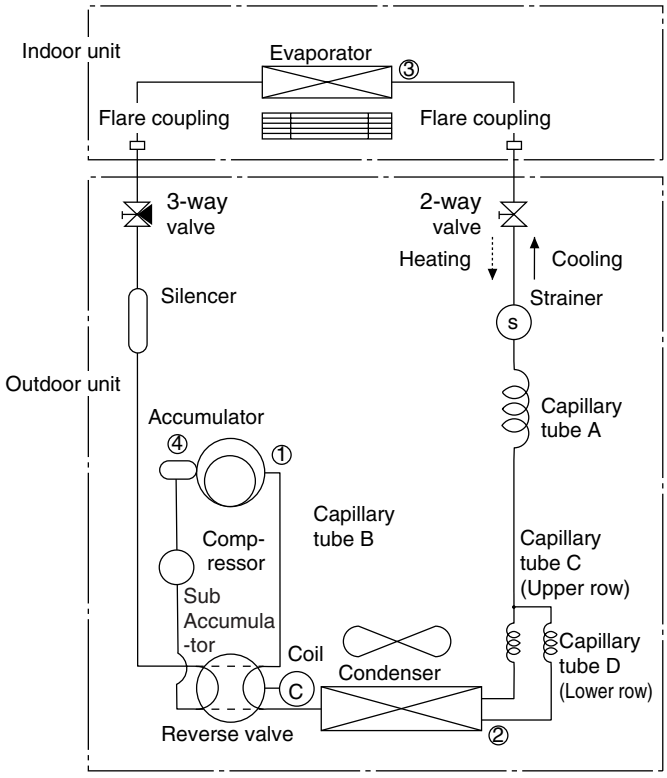


Figure R-2. Flow of Refrigerant for AY-AP18CE

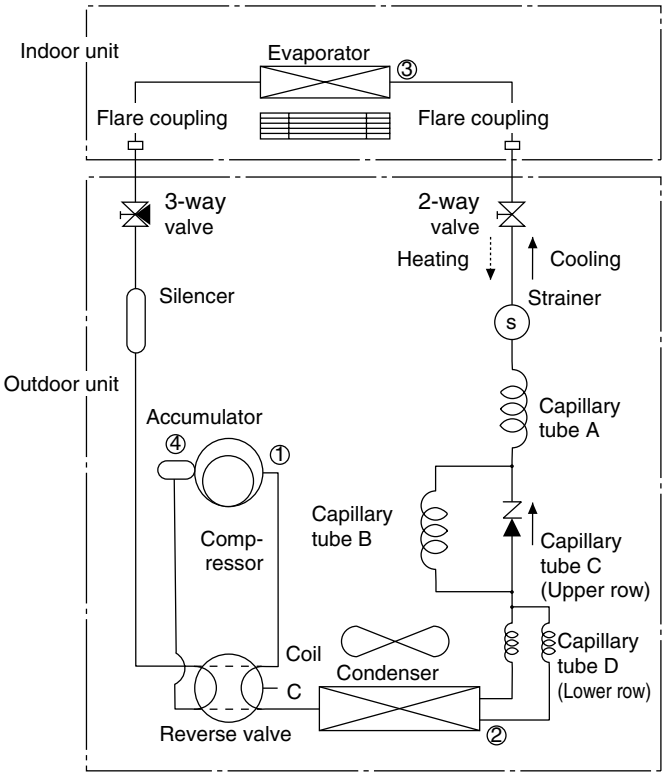


Figure R-3. Flow of Refrigerant for AY-AP24CE

Cycle temperature and service port pressure

Based on 'ISO 5151:1994(E),condition T1'
(at 220V refrigerant pipes length 7.5m)

Model	AY-AP18CE		AY-AP24CE	
NO. Condition	Cooling	Heating	Cooling	Heating
①	94˚C	77˚C	89˚C	88˚C
②	41˚C	2˚C	42˚C	2˚C
③	11˚C	35˚C	12˚C	38˚C
④	7˚C	-2˚C	3˚C	-2˚C
※ Service port pressure	0.58MPa	1.8MPa	0.53MPa	2.1MPa

ISO condition

	Indoor side		Outdoor side	
	Temperature (˚C)	Relative humididity (%)	Temperature (˚C)	Relative humididity (%)
Cooling	27	47	35	40
Heating	20	-	7	87

Dimension of Capillary tube

For AY-AP18CE

	O.D.	I.D.	L
Capillary tube A	ø 3.2	ø 2.0	1200
Capillary tube C (Upper row)	ø 2.7	ø 1.6	150
Capillary tube D (Lower row)	ø 2.7	ø 1.6	244

For AY-AP24CE

	O.D.	I.D.	L
Capillary tube A	ø 3.5	ø 2.2	400
Capillary tube B	ø 3.5	ø 2.2	700
Capillary tube C (Upper row)	ø 2.7	ø 1.6	150
Capillary tube D (Lower row)	ø 2.7	ø 1.6	244

Cycle temperature and service port pressure

Based on 'ISO 5151:1994(E),condition T1'
(at 220V refrigerant pipes length 7.5m)

Model	AY-P18CE	AY-P24CE
NO. Condition	Cooling	Cooling
①	93˚C	91˚C
②	40˚C	43˚C
③	11˚C	11˚C
④	9˚C	2˚C
※ Service port pressure	0.55MPa	0.5MPa

ISO condition

	Indoor side		Outdoor side	
	Temperature (˚C)	Relative humididity (%)	Temperature (˚C)	Relative humididity (%)
Cooling	27	47	35	40

Dimension of Capillary tube

For AH-AP18CE

	O.D.	I.D.	L
Capillary tube	ø 3.2	ø 2.0	1000

For AH-AP24CE

	O.D.	I.D.	L
Capillary tube	ø 3.5	ø 2.2	450

PERFORMANCE CURVES

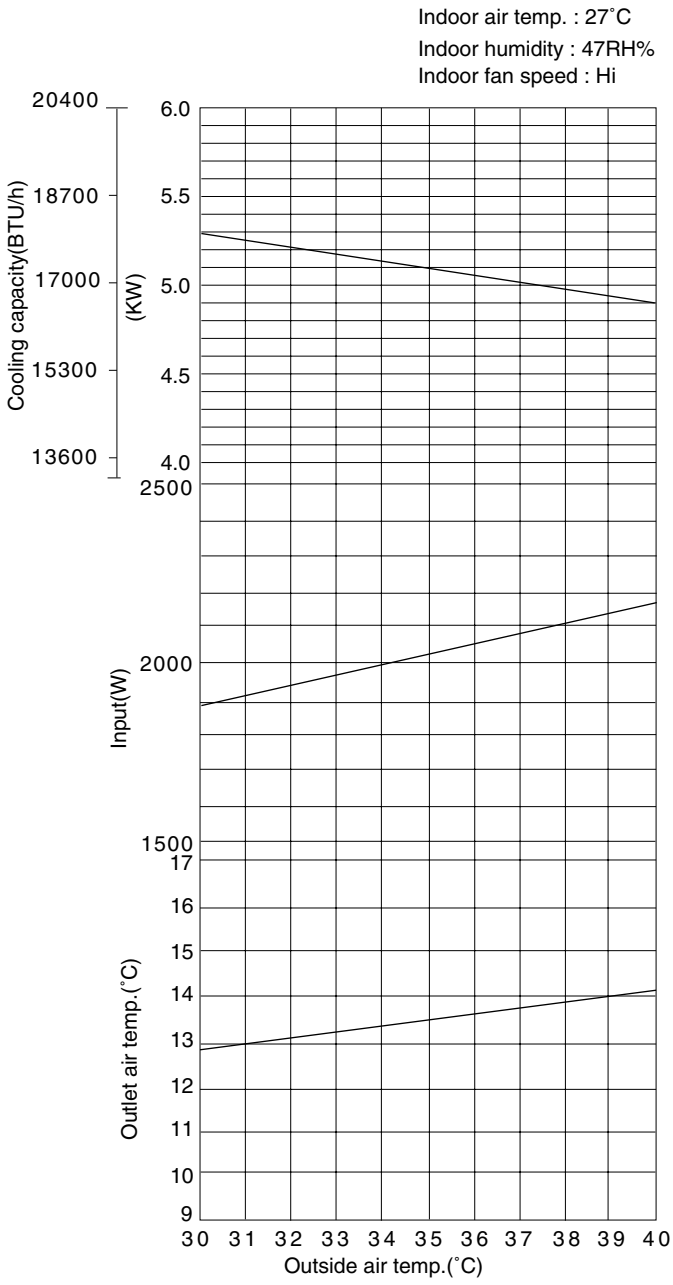


Figure P-1. At Cooling for AY-AP18CE

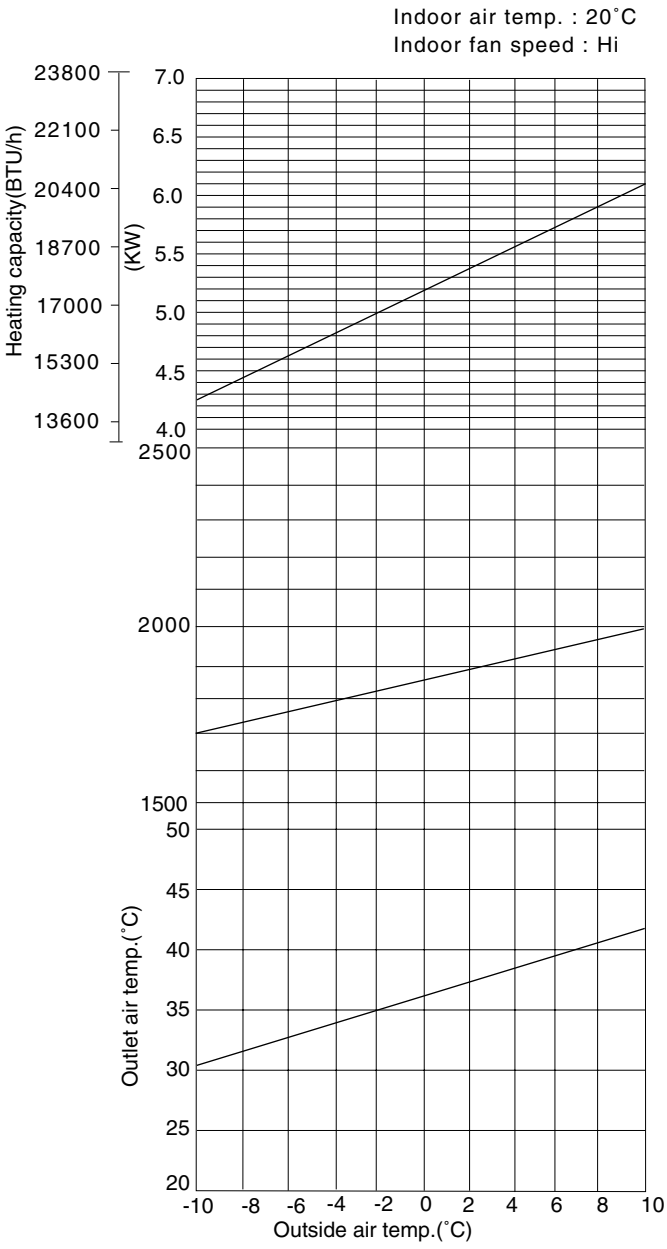


Figure P-2. At Heating for AY-AP18CE

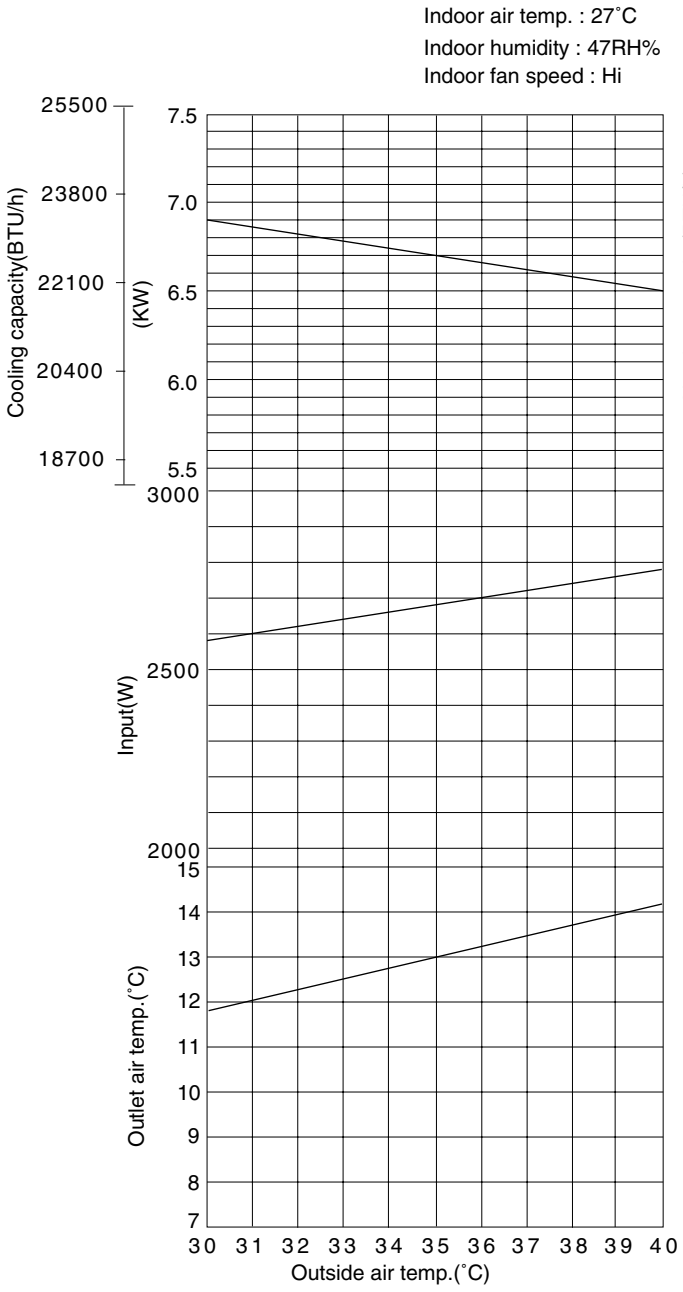


Figure P-3. At Cooling for AY-AP24CE

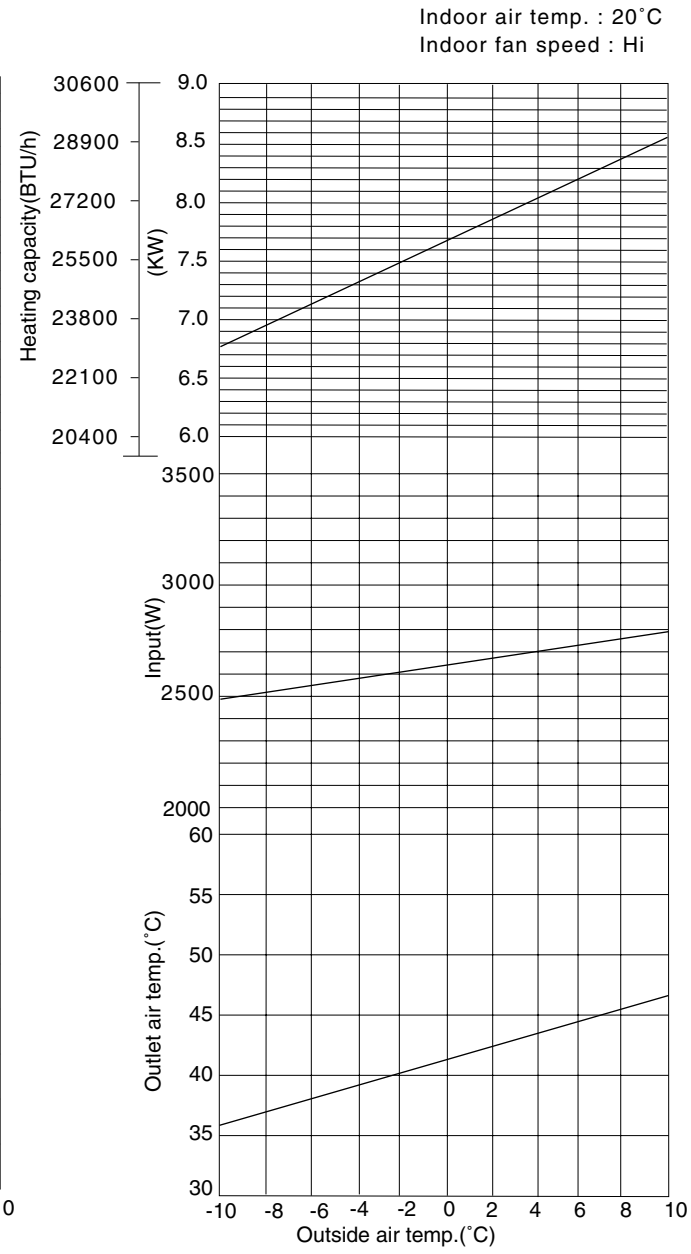


Figure P-4. At Heating for AY-AP24CE

REFRIGERANT PIPE INSTALLATION WORKS

Refrigerant pipe length and level difference between the indoor and outdoor units.

MODEL	PIPE SIZE		STANDARD PERMISSIBLE LENGTH	PERMISSIBLE LEVEL DIFERENCE
	GAS	LIQUID		
AY-AP18CE	1/2"	1/4"	15m	10m
AY-AP24CE	5/8"	1/4"	15m	10m

The shorter refrigerant pipe, the highter the machine capabillity. Keep the pipe line as short as possible.

If actual pipe length exceeds 7.5m, and refrigerant (R-22) 15g per 1m.

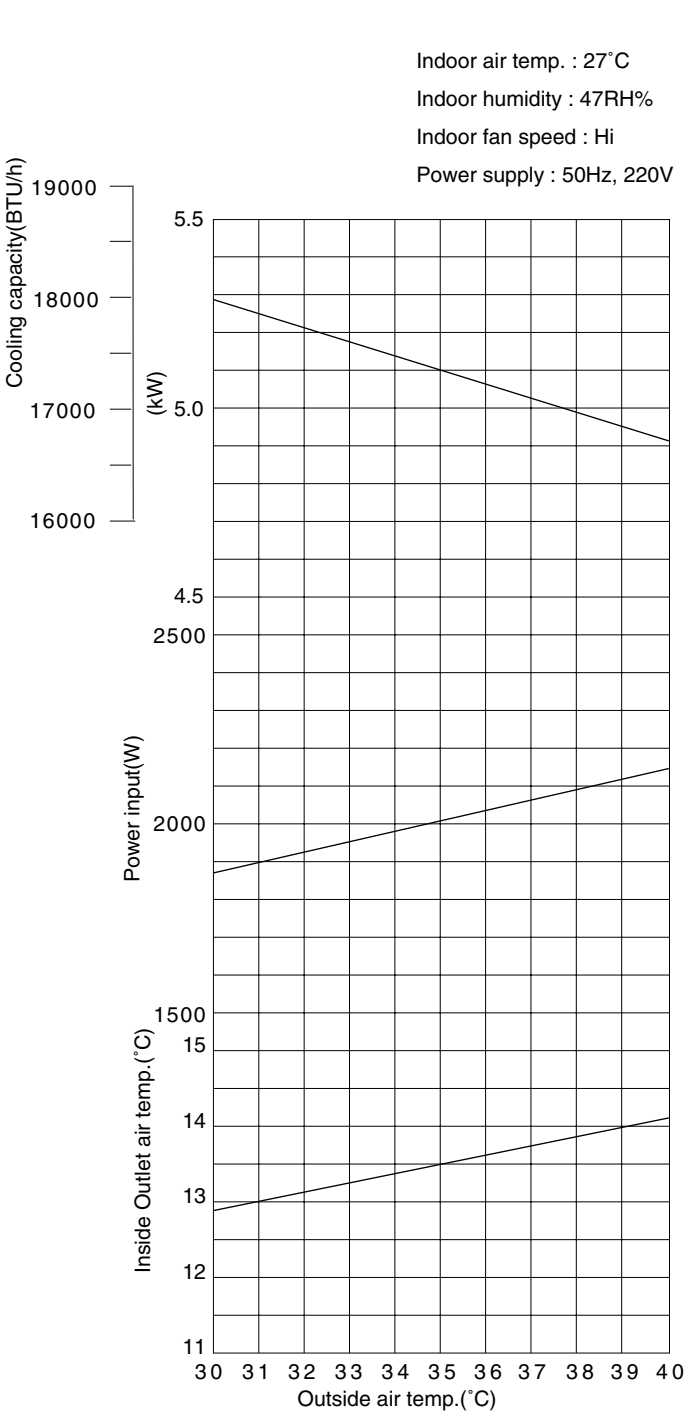


Figure P-5. At Cooling for AH-AP18CE

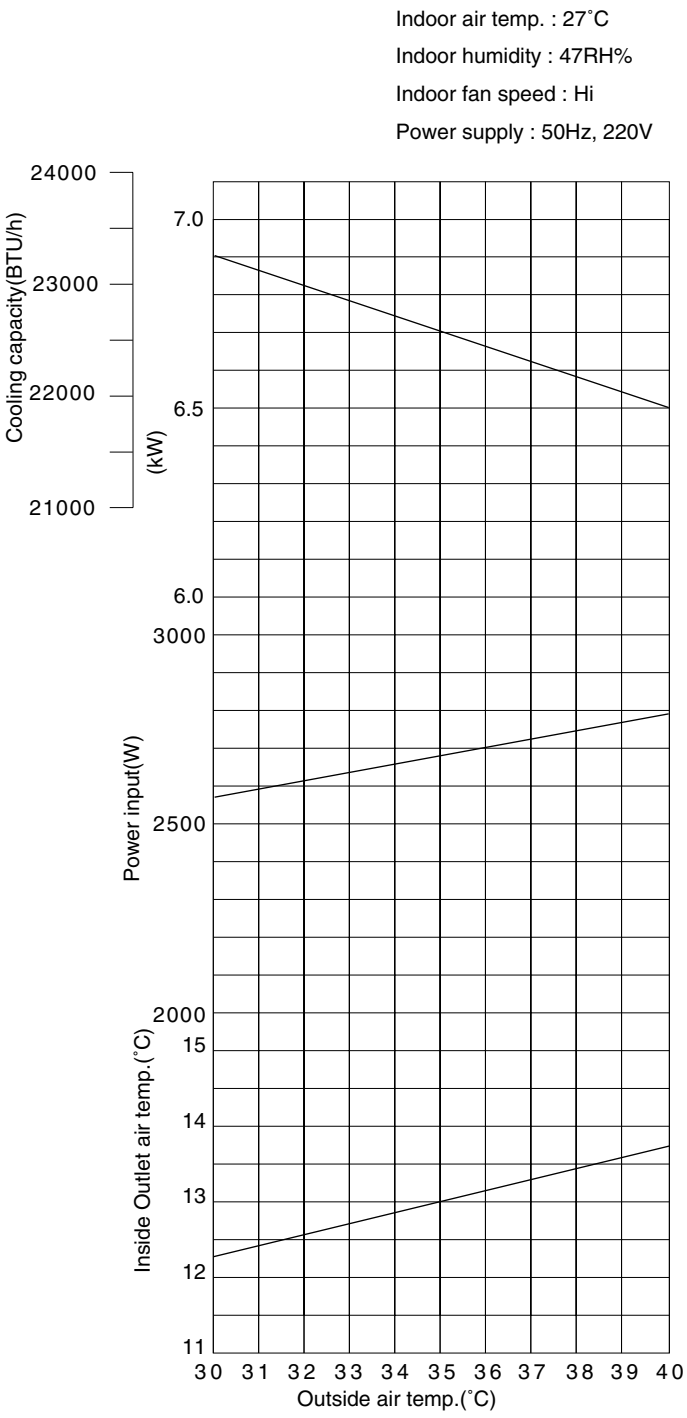


Figure P-6. At Cooling for AH-AP24CE

REFRIGERANT PIPE INSTALLATION WORKS

Refrigerant pipe length and level difference between the indoor and outdoor units.

MODEL	PIPE SIZE		STANDARD PERMISSIBLE LENGTH	PERMISSIBLE LEVEL DIFERENCE
	GAS	LIQUID		
AH-AP18CE	1/2"	1/4"	15m	10m
AH-AP24CE	5/8"	1/4"	15m	10m

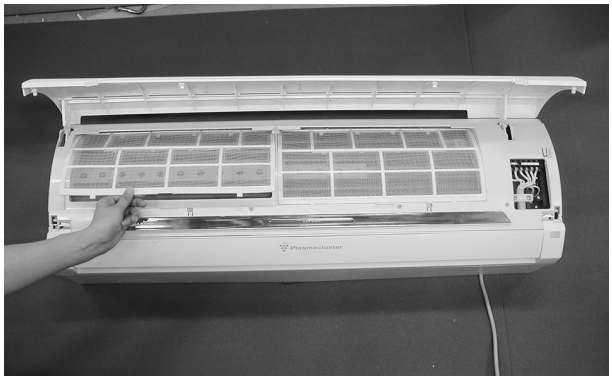
The shorter refrigerant pipe, the highter the machine capabillity. Keep the pipe line as short as possible.

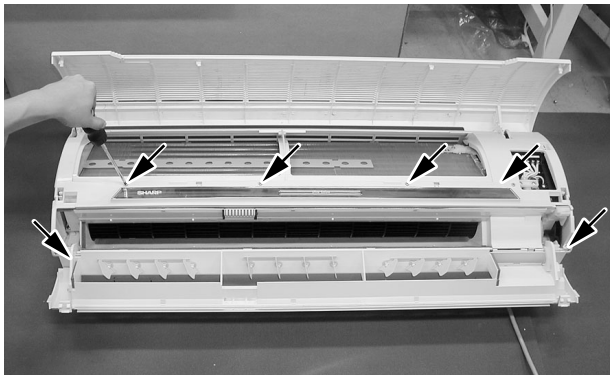
If actual pipe length exceeds 7.5m, and refrigerant (R-22) 15g per 1m.

DISASSEMBLING PROCEDURE

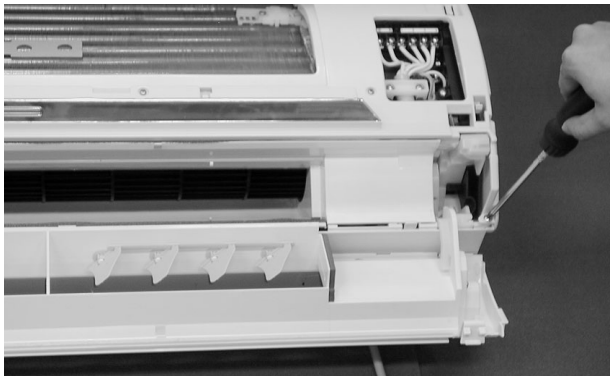
FOR INDOOR UNIT MODEL(AH-AP18CE/AP24CE,AY-AP18CE/AP24CE)

CAUTION:DISCONNECT THE UNIT FROM THE POWER SUPPLY BEFORE ANY SERVICING

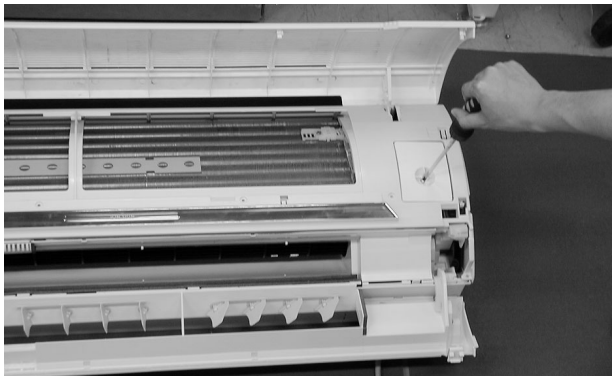




1. Open the Opne panel, remove 2 Air Filters.

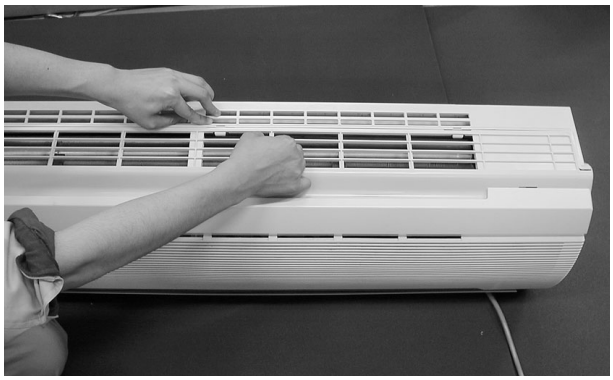


3. Remove 6 screws fixing the Front panel.

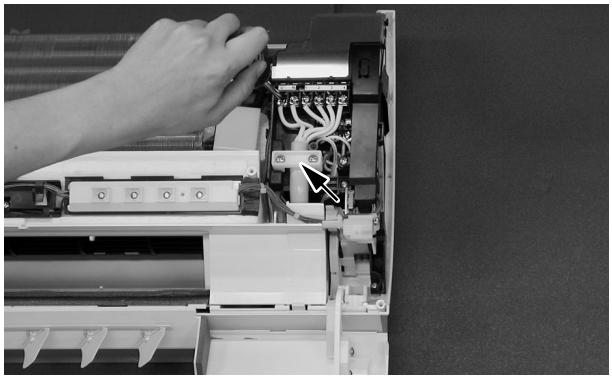


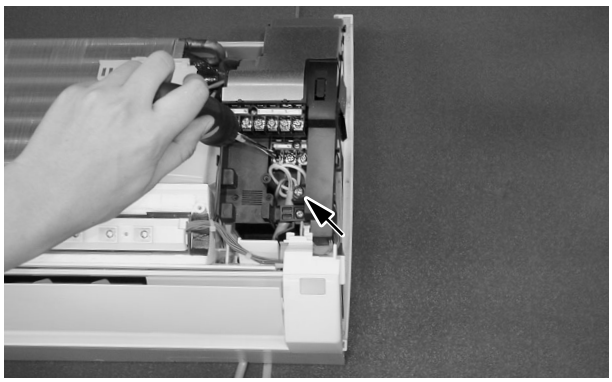
2. Open the Louver frame.unlook the hooks,and pull the unit.

4. Remove the screw fixing the Cord holder.

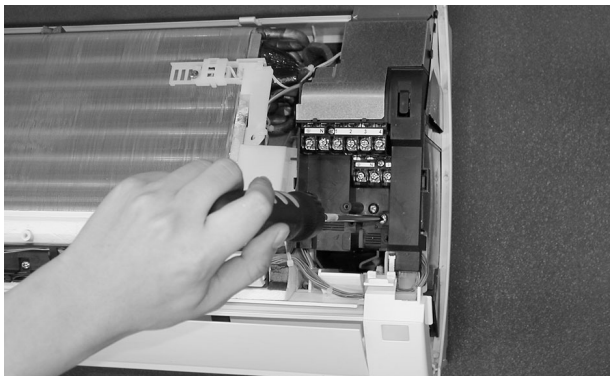


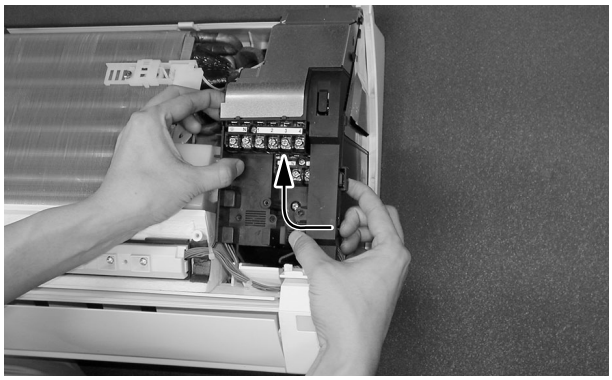
5. Close the Open panel. pushing the nail of the Front panel, and lift the Front panel up.



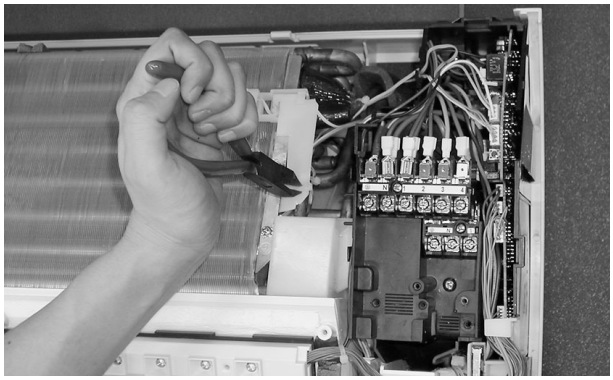


6. Remove the unit-to-unit wiring from the Terminal board.

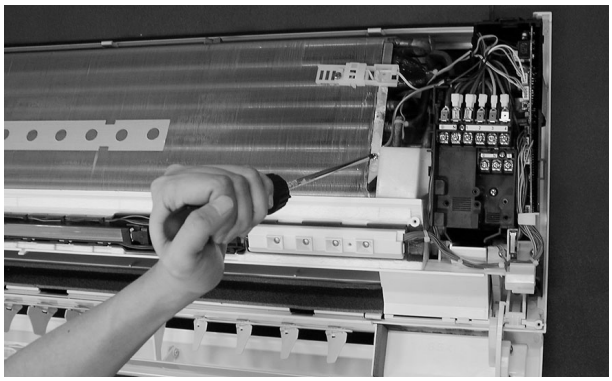




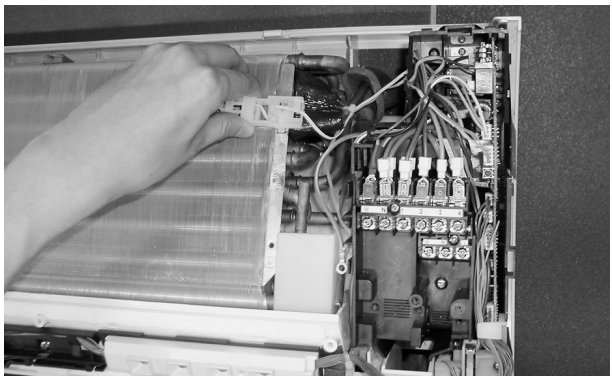
7. Remove a screw fixing the Control box cover.

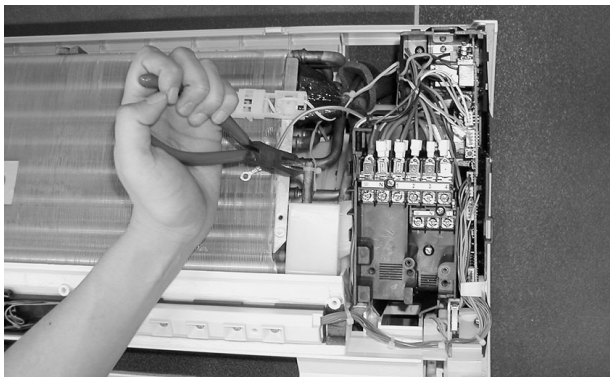


8. Cut the fixing band and Remove the Cover B.

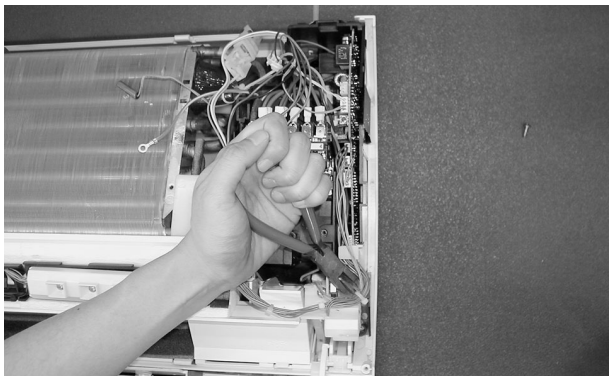


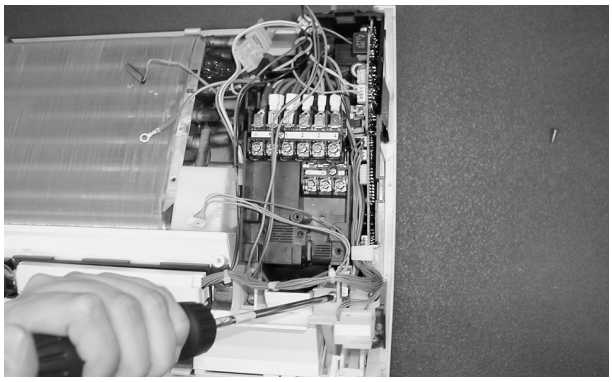
9. Remove a screw fixing the ground wire.



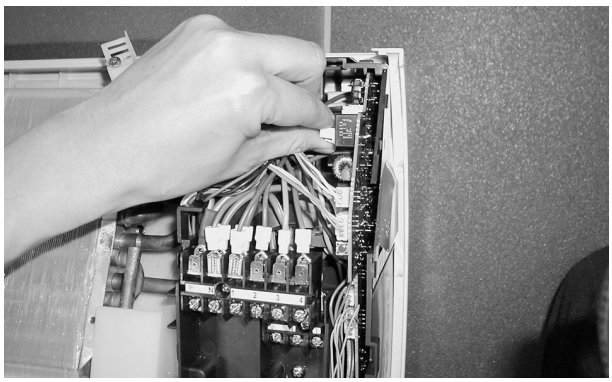


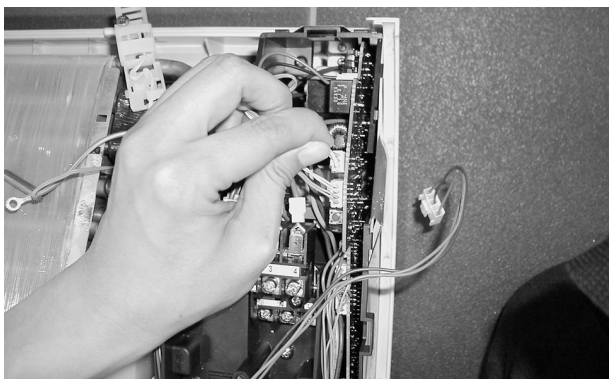
10. Remove the Thermistor of the Evaporator.



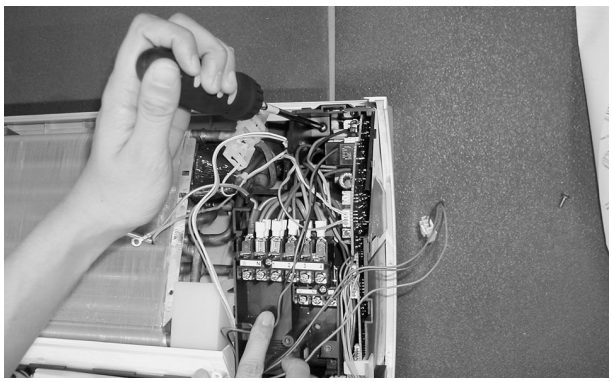


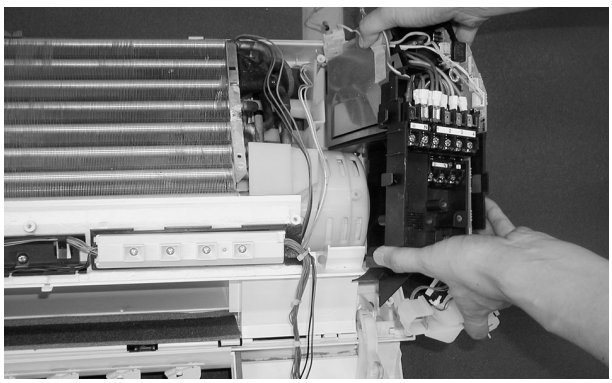
12. Cut the fixing band and Remove the Holder.



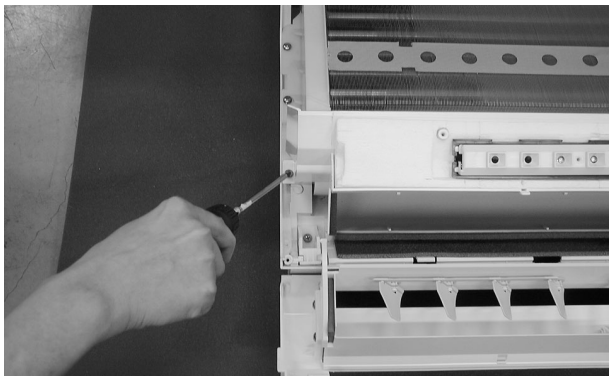


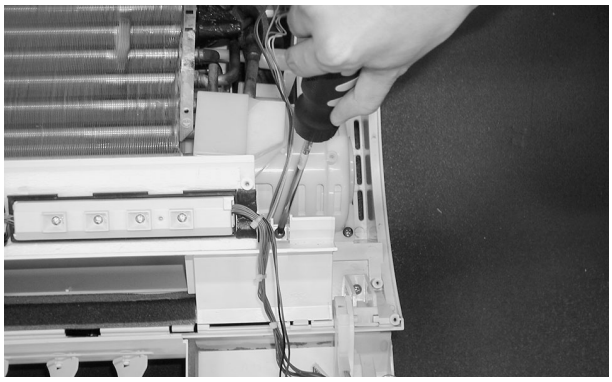
11. Remove Connectors.



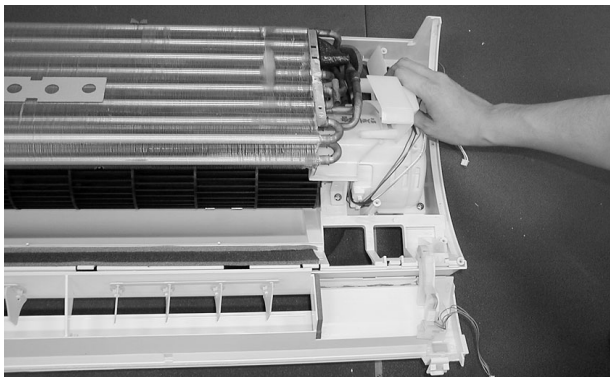


13. Remove 2 screws fixing the Control box and remove it.



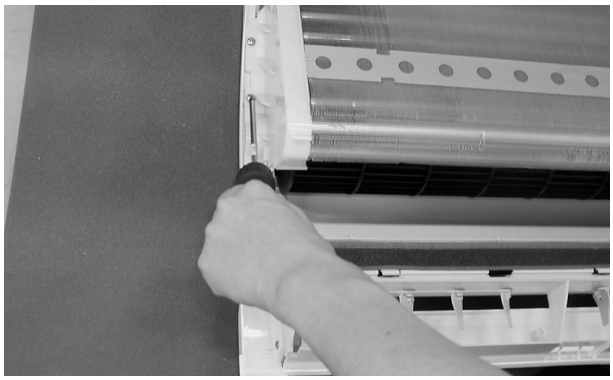


14. Remove a screw fixing the drain pan and pull Drain pan toward you.

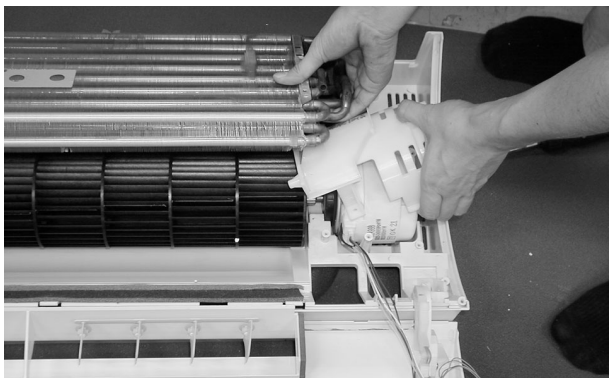


15. Remove the Drain cover from the Evaporator.

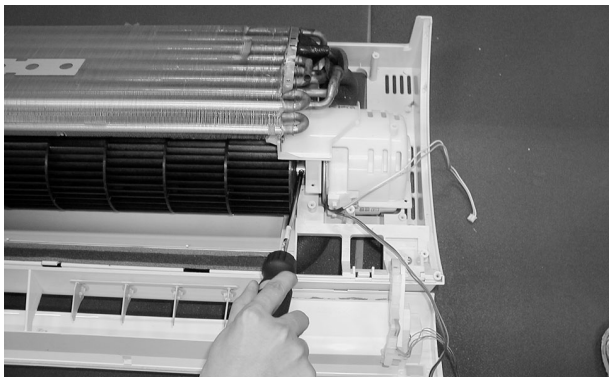
16. Remove 3 screws fixing the Evaporator.



17. Remove the Evaporator from the Cabinet.

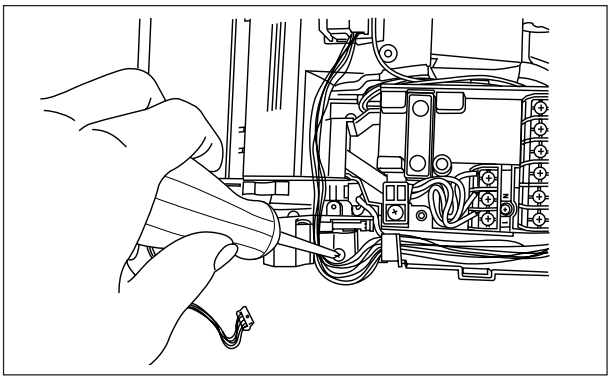


18. Remove 4 screws fixing the Side cover R, and pull up the Cross flow fan.

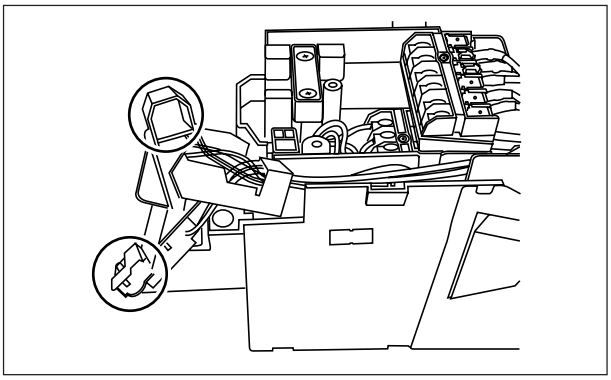


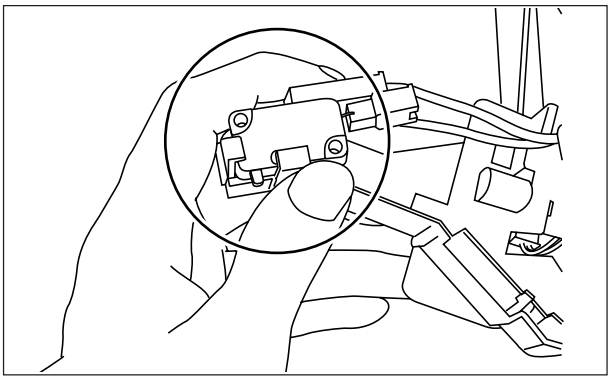
19. Loose a screw fixing Cross flow fan.

The Electric Control box.

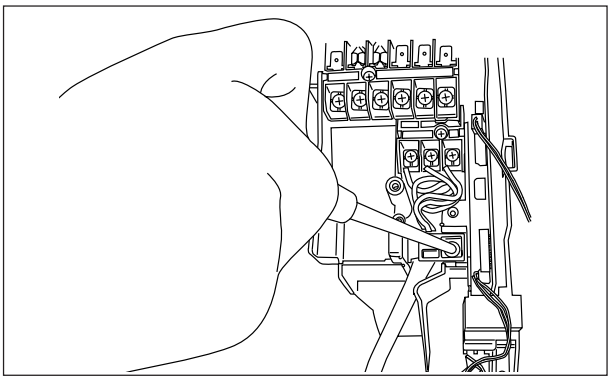


1. Remove the screw fixing the Receiving filter.

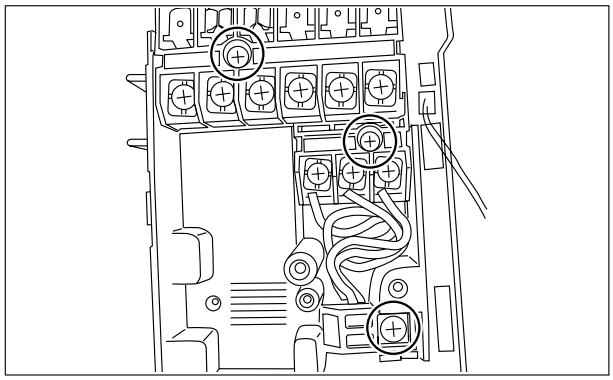




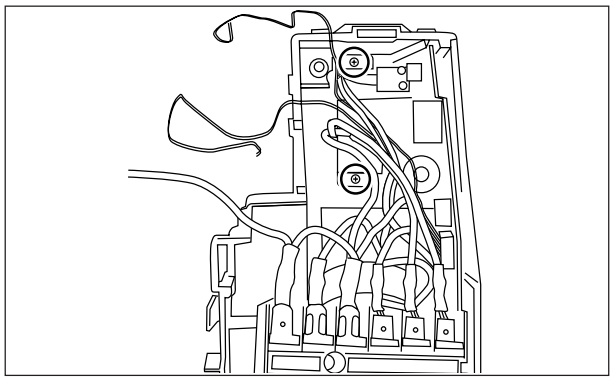
2. Remove the 2 Switch and Photo detector unit.

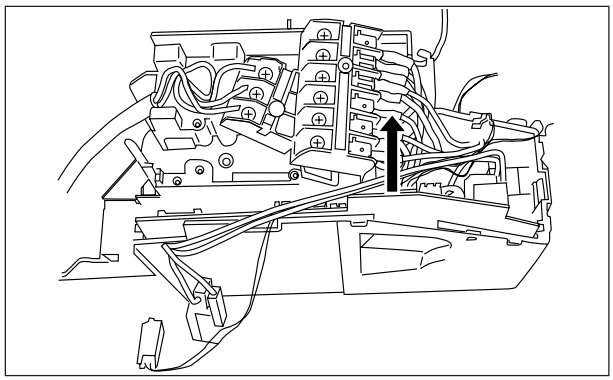


3. Remove a screw fixing the Cord holder.



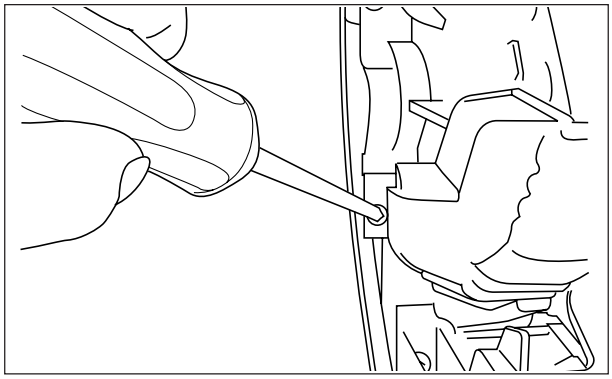
4. Remove a screw fixing the Cord holder and 2 screws fixing the Terminal board.

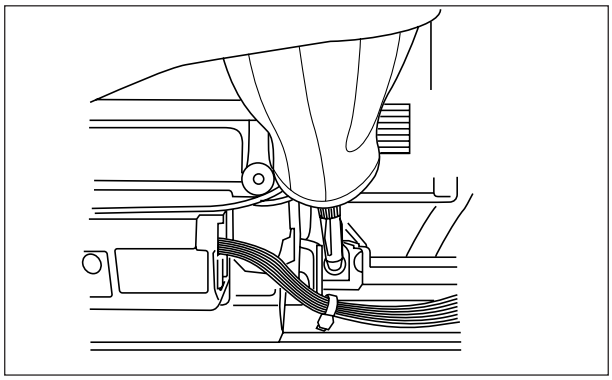




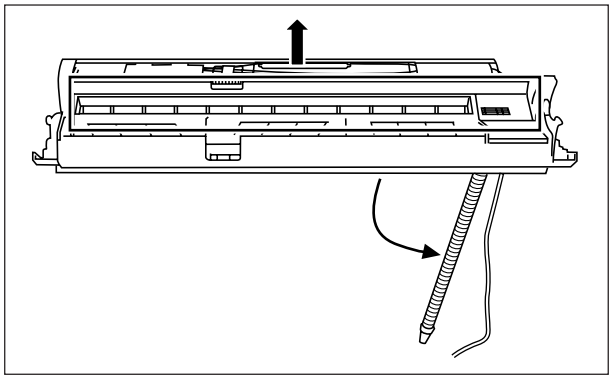
5. Remove 2 screws fixing the Transformer and pull the Control board unit.
The DRAIN PAN and related

The DRAIN PAN and related



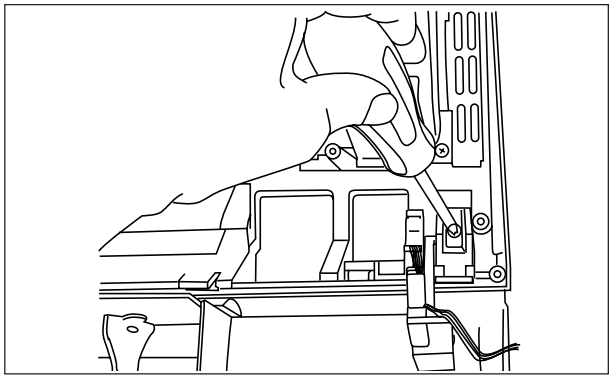


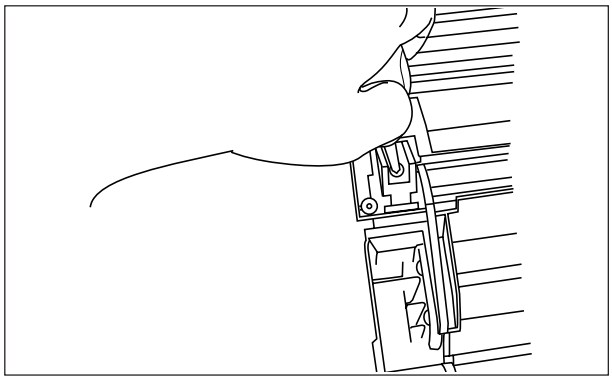
1. Remove the screw fixing the Drain pan on both side.



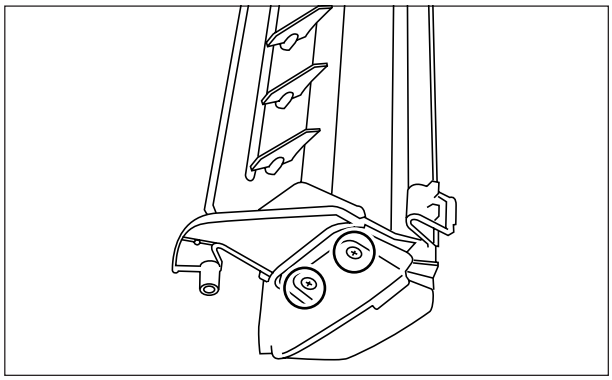
2. Turn left the Drain hose.

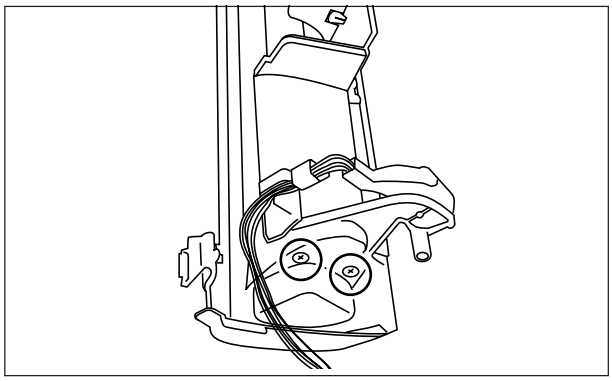
The LOUVER FRAME UNIT and related



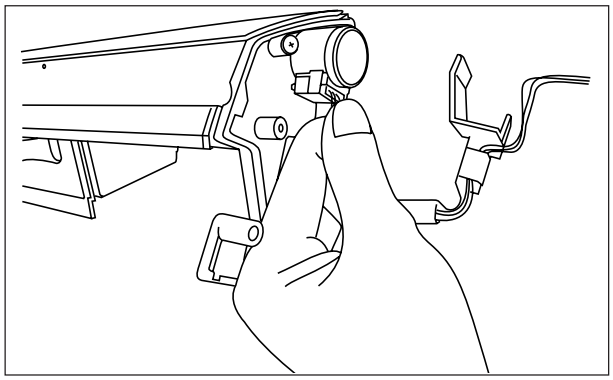


1. Remove the screw fixing the FRAME GUIDE on both side and take off the LOUVER UNIT.

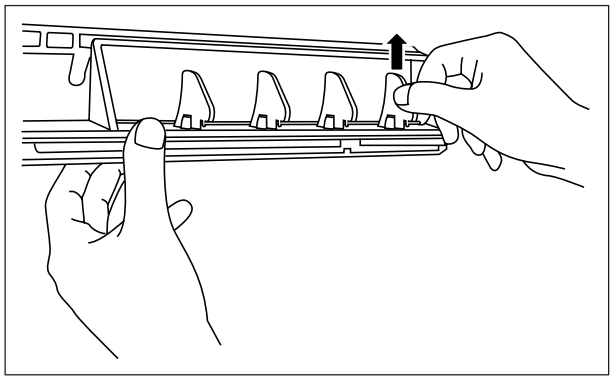




2. Remove 2 screws fixing Cover-L and Cover-R and take off them.

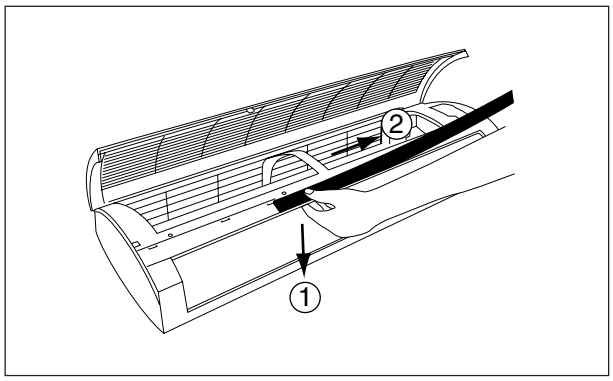


3. Remove the connector of Louver motor and take off the Wire and Holder.



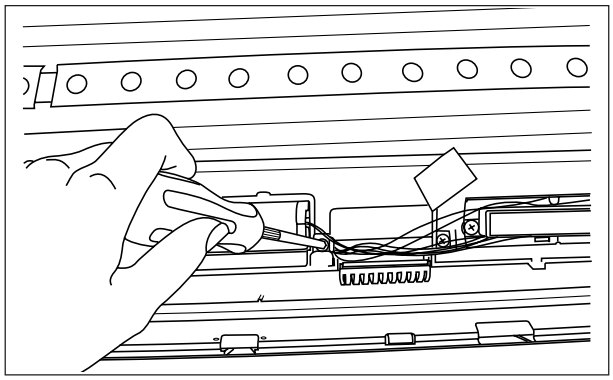
4. Push the one of the Vertical louver.

How to remove the DISPLY COVER.

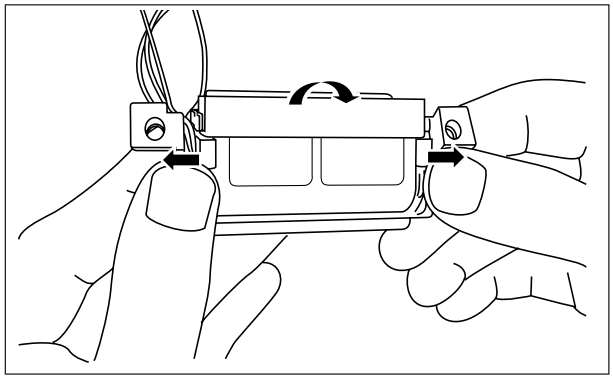


(1) Push the center of the Front panel under the Display cover.
(2) Slide it to one side.

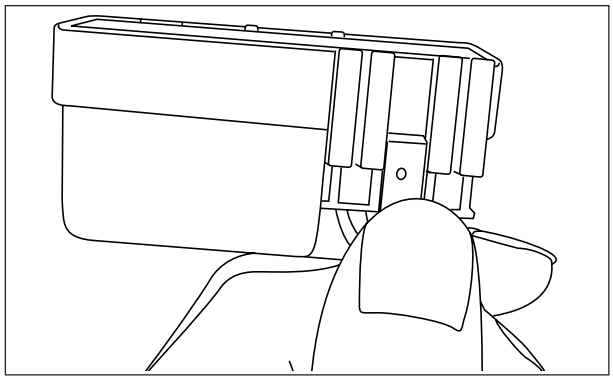
How to remove the Hi Voltage UNIT.



1. Remove 2 screws fixing Holder.



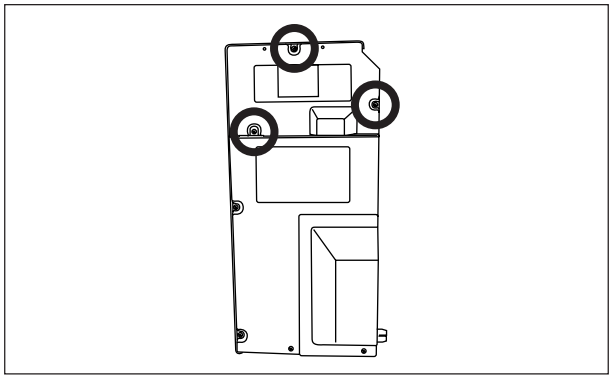
2. Take off the HIGH VOLTAGE UNIT ASS'Y from the HOLDER



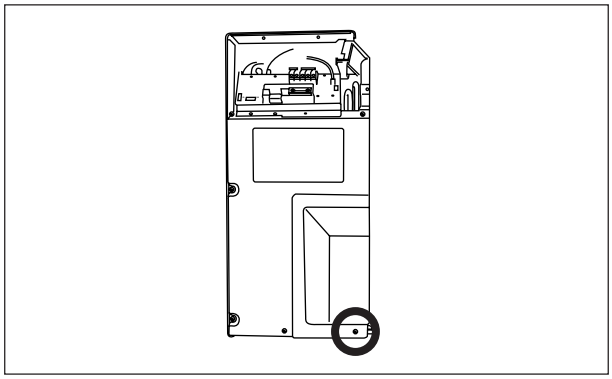
3. Remove the connector of HIGH VOLTAGE UNIT ASS'Y

FOR OUTDOOR UNIT MODEL AE-A18CE/AE-A24CE

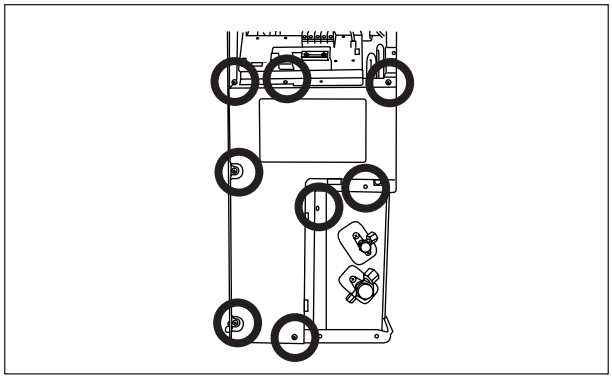
DISASSEMBLING PROCEDURE OF THE CONTROL BOX



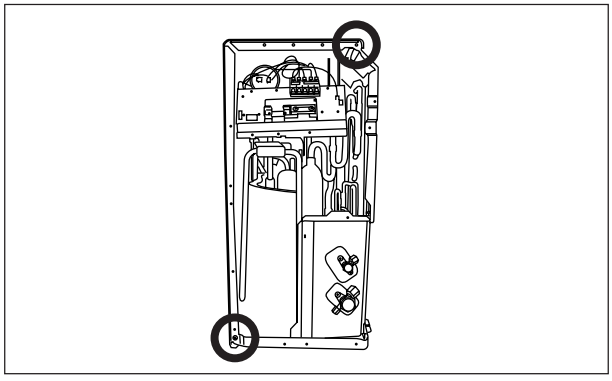
1. Loose 3 screws fixing the control cover.



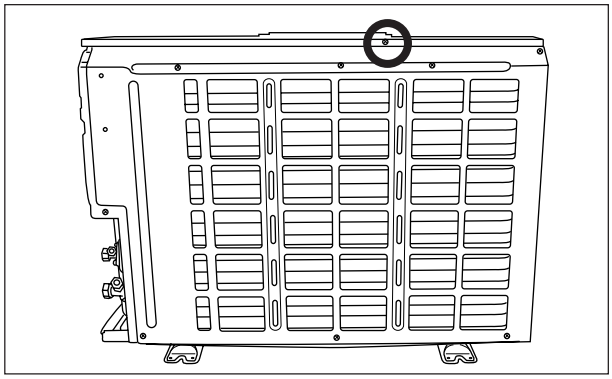
2. Loose 1 screw fixing the side cover.



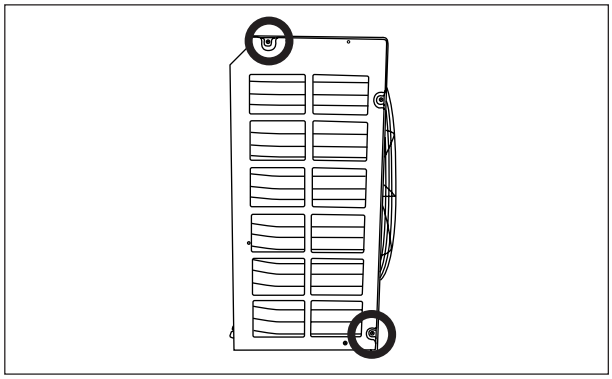
3. Loose 8 screws fixing the side cover R.



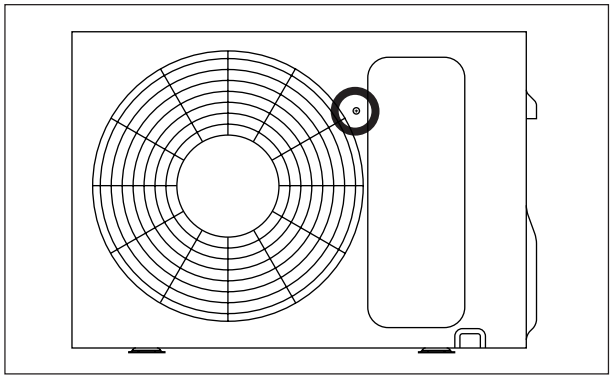
4. Loose 2 screws fixing the cabinet (left side).



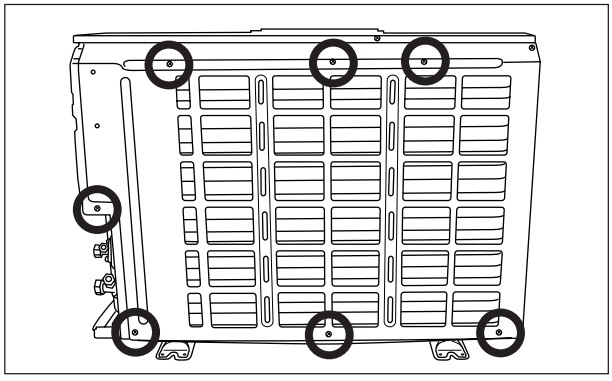
5. Loose 1 screw fixing the cabinet (rear side).



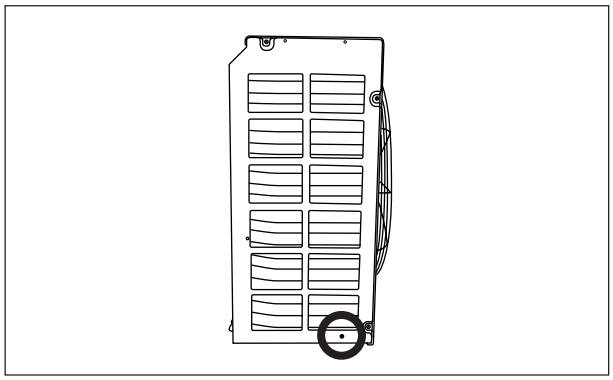
6. Loose 3 screw fixing the cabinet (right side).



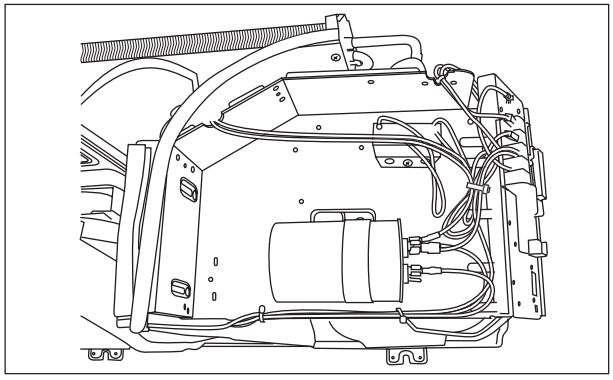
7. Loose 1 screw fixing the cabinet (front side).



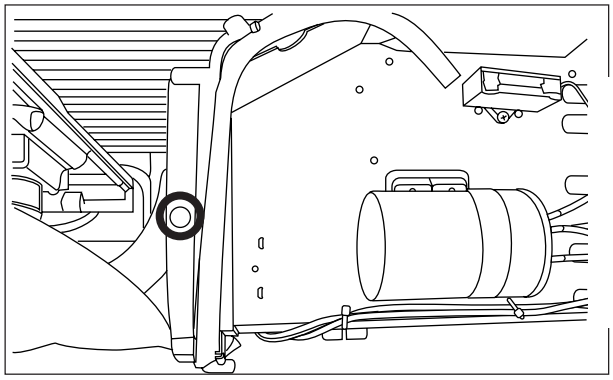
8. Loose 7 screws fixing the rear cabinet.



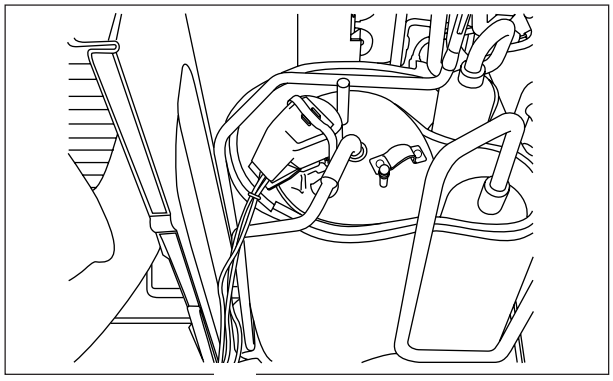
9. Loose 1 screw fixing the rear cabinet (left side).



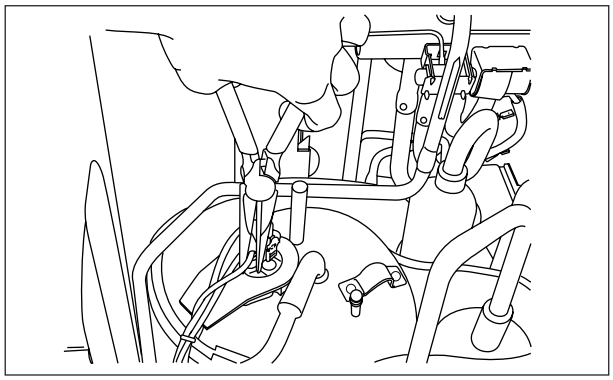
10. Cut nylon band.



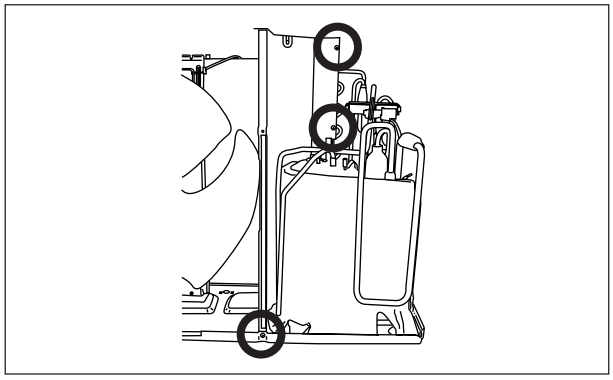
11. Loose 1 screw fixing the control box.



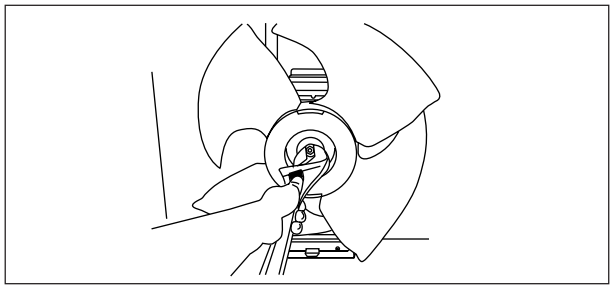
12. Remove the terminal cover.



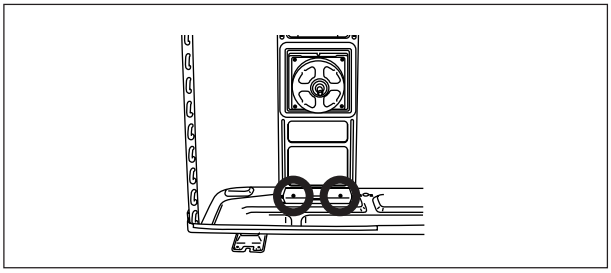
13. Remove 3 terminals.
14. Loose 3 screws fixing the bulkhead.



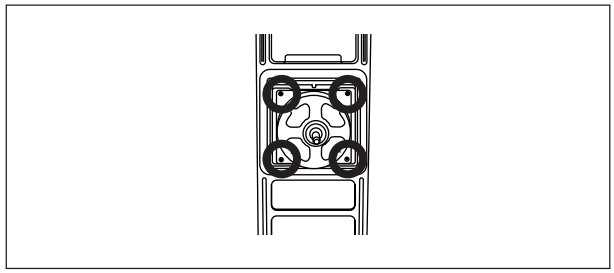
DISASSEMBLING PROCEDURE OF THE FAN



1. Loose the fan nut and fan can take out.



2. Loose 2 screw fixing the fan motor angle



3. Cut the nylon band and loose 4 screws fixing the fan motor.

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
		CABINET AND UNIT PARTS		
1- 1	CMOT-A405JBKZ	Fan moter sub assembly	1	BR
1- 2	PGUMSA088JBE0	Moter rubber	2	AL
1- 3	GWAK-A270JBFA	Front panel	1	BA
1- 4	CHLD-A067JBK0	Bearing assembly	1	AL
1- 5	DCHS-A437JBKZ	Cabinet sub assembly	1	BF
1- 6	NFANCA091JBEZ	Cross flow fan	1	BD
1- 7	DSRA-A245JBKZ	Drain pan sub assembly	1	BD
1- 8	CWAK-C200JBKZ	Louver Frame assembly	1	BE
1- 9	MJNTPA082JBFA	Louver link	3	AC
1-10	MLOV-A299JBFA	Vertical louver	12	AC
1-11	MLOV-A297JBFA	Horizontal louver	1	AK
1-12	QW-VZE168JBZZ	Lead wire (for Louvermotor)	1	AH
1-13	LHLD-A197JBFP	Louver holder	2	AC
1-14	NBRG-A026JBFA	Louver bushing	1	AB
1-15	PCOV-A752JBFA	Receving filter	1	AC
1-16	PHOS-A033JBEZ	Drain hose	1	AP
1-17	PPACGA026JBEZ	O ring	1	AC
1-18	PCOV-A750JBFZ	Drain cover	1	AF
1-19	RMOT-A099JBEZ	Louver motor	1	AT
1-20	CWAK-C201JBKZ	Front panel assembly	1	BE
1-21	FCOV-A104JBFA	Cover R	1	AE
1-22	FCOV-A105JBFA	Cover L	1	AE
1-23	PCOV-A745JBRA	Display cover	1	BB
1-24	HDEC-B145JBRA	Display panel	1	AP
1-25	PFILMA163JBEA	Air filter	2	AK
1-26	DHLD-A010JBKZ	Tube holder assembly	1	AK
1-27	HPNL-A568JBFA	Open panel	1	BA
1-28	PPLT-A278JBFZ	Side cover L	1	AK
1-29	PPLT-A277JBFZ	Side cover R	1	AH
1-30	PSHE-A200JBEZ	Evaporator sheet	1	AD
1-31	LSPR-A021JBEZ	Sheet spring	4	AE
1-32	LHLD-A550JBRA	Display cover	1	BE
1-33	PGID-A103JBFA	Frame guide	2	AU
1-34	DCOV-A204JBKZ	Cluster cover ass'y	1	AE
1-35	LHLD-A536JBFA	Holder	1	AM
1-36	LHLD-A277JBF0	Tube holder	1	AD
1-37	PCOV-A819JBEZ	Cover	1	AA
1-38	PCOV-A820JBEZ	Cover B	1	AB
1-39	LHLD-A548JBFA	Holder	1	AM
1-40	LHLD-A549JBFA	Holder	1	AM
1-41	QW-VZE167JBZZ	Lead wire	1	AM
1-42	PFPFPC205JBEZ	Filter insulator	2	AA
1-43	TSPC-E019JBRA	Name label [AH-AP18CE]	1	AE
1-43	TSPC-E018JBRA	Name label [AH-AP24CE]	1	AE
1-43	TSPC-E008JBRA	Name label [AY-AP18CE]	1	AE
1-43	TSPC-E017JBRA	Name label [AY-AP24CE]	1	AE
1-44	TLABCB554JBRZ	Wiring diagram [AY-AP18CE]	1	AD
1-44	TLABCB560JBRZ	Wiring diagram [AH-AP18CE]	1	AC
1-44	TLABCB559JBRZ	Wiring diagram [AY-AP24CE]	1	AD
1-44	TLABCB561JBRZ	Wiring diagram [AH-AP24CE]	1	AD
		CONTROL BOX PARTS		
2- 1	RTHM-A300JBE0	Thermistor	1	AN
2- 2	PBOX-A378JBFA	Control box	1	AX
2- 3	PCOV-A744JBWZ	Control box cover	1	AS
2- 4	LHLD-A500JBFZ	Thermistor holder	1	AC
2- 5	PCOV-A300JBF0	Thermo holder cover	1	AB
2- 6	CPNL-A414JBKZ	Control box cover	1	AK
2- 7	CKITTA002JBKZ	High voltage unit (Plasma cluster unit)	1	BA
2- 8	LHLD-A537JBFA	LED holder	1	AM
2- 9	LHLD-A542JBFA	Holder	2	AM
2-10	DPWBFA251JBKZ	Control board unit [AH-AP18CE]	1	BQ
2-10	DPWBFA250JBKZ	Control board unit [AH-AP24CE]	1	BQ
2-10	DPWBFA242JBKZ	Control board unit [AY-AP18CE]	1	BR
2-10	DPWBFA249JBKZ	Control board unit [AY-AP24CE]	1	BR
2-11	QACC-A158JBE0	Power supply cord [AY-AP18CE/AH-AP18CE]	1	AT
2-12	QTANZA002JBZZ	Terminal board (3pin)	1	AR
2-13	QTANZA002JBZZ	Terminal board (3pin) [AH-AP18CE]	1	AN
2-13	QTANZA001JBZZ	Terminal board (4pin) [AH-AP24CE]	1	AQ
2-13	QTANZA003JBZZ	Terminal board (5pin) [AY-AP18CE]	1	AR
2-13	QTANZA004JBZZ	Terminal board (6pin) [AY-AP24CE]	1	AT
2-14	FCOV-A106JBFA	Receiving filters	1	AC
2-15	PCOV-A742JBFA	LED holder	2	AC

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
2-16	LHLD-A354JBFA	Cord holder	1	AD
2-17	LHLD-A539JBFA	Cord holder	1	AE
2-18	LHLD-A540JBFA	Holder	1	AM
2-19	QSW-MA005JBZZ	Switch	1	AG
2-20	QSW-MA147WRZZ	Micro switch A	1	AG
2-21	RC-HZA421JBZZ	Fan motor capacitor (C1)	1	AP
2-22	RH-IXA691JBZZ	Microcomputer (IC1)	1	AU
2-23	RH-IZA149JBE0	Integrated circuit (IC2)	1	AE
2-24	RIC--A022BDE0	Integrated circuit (IC3)	1	AE
2-25	RIC--A025BDE0	Integrated circuit (IC4, IC5)	2	AE
2-26	RH-IZA140JBE0	Integrated circuit (IC6)	1	AE
2-27	VHIBR24C01A-6	Integrated circuit (IC8)	1	AF
2-28	RRMCUA001JBZZ	Integrated circuit (IC101)	1	AK
2-29	RH-VXA002JBZZ	Varistor (NR1)	1	AF
2-30	RTRN-A181JBE0	Current transformer (CT1)	1	AN
2-31	VHRS201D01/-6	Solid state relay (SSR1)	1	AK
2-32	RH-FZA015JBE0	Solid state relay (SSR2)	1	AH
2-33	RTRN-A287JBZZ	Transformer (TR1)	1	AT
2-34	RRLYDA004JBZZ	Relay (RY1) [AH-AP18CE, AY-AP18CE]	1	AG
2-35	RRLYDA008JBZZ	Relay (RY4) [AH-AP24CE]	1	AH
2-35	RRLYDA008JBZZ	Relay (RY4) [AY-AP18CE]	2	AH
2-35	RRLYDA008JBZZ	Relay (RY4) [AY-AP24CE]	3	AH
2-36	QFS-GA027JBE0	Fuse (WPE1)	1	AD

CYCLE PARTS

3- 1	CPIPCA723JBKZ	Tube assembly [AH-AP18CE, AY-AP18CE]	1	BA
3- 1	CPIPCA729JBKZ	Tube assembly [AH-AP24CE, AY-AP24CE]	1	BA
3- 2	PSEN-A042JBKZ	Flare nut assembly (1/4")	1	AL
3- 3	PSEN-A043JBKZ	Flare nut assembly (3/8")	1	AD
3- 3	PSEN-A048JBKZ	Flare nut assembly (1/2") [AH-AP24CE, AY-AP24CE]	1	AP
3- 4	PVLV-A222JBEZ	Flare union (1/4")	1	AG
3- 5	PVLV-A223JBEZ	Flare union (3/8")	1	AL
3- 5	PVLV-A238JBEZ	Flare union (1/2") [AH-AP24CE, AY-AP24CE]	1	AM
3- 6	DEVA-A161JBKZ	Evaporator sub assembly [AH-AP18CE, AY-AP18CE]	1	BW
3- 6	DEVA-A165JBKZ	Evaporator sub assembly [AH-AP24CE, AY-AP24CE]	1	BW

ACCESSORY PARTS

4- 1	CRMC-A561JBEZ	Remote control [AH-AP18CE, AY-AP24CE]	1	BA
4- 1	CRMC-A562JBEZ	Remote control [AH-AP18CE, AH-AP24CE]	1	BA
4- 2	UBATUA027JBE0	Battery pack	1	AE
4- 3	LHLD-A535JBFA	Cord holder(for covering the terminal board of indoor unit)	1	AE
4- 4	XTTSD40P20000	Tapping screw (for fixing the cord holder)	1	AA
4- 5	LX-NZA207JBEZ	Special nut (for fixing long screw steadily)	9	AE
4- 6	LPFT-A029JBF0	Drain joint [AY-AP18CE, AY-AP24CE]	1	AD
4- 7	PPLTNA061JBWZ	Mounting angle	1	AT
4- 8	XTTSD45P30000	Long screw	8	AA
4- 9	TINSEA293JBRZ	Operation manual	1	AN
4-10	TINS-A703JBRZ	Installation manual (Englisg,German,French,Spanish)	1	AE
4-11	TINS-A704JBRZ	Installation manual (Italian,Portuguese,Greek,Russian)	1	AE
4-12	LX-BZA106JBE0	Special screw (for hanging remote controller)	1	AE

SCREWS

5- 1	LX-BZA075JBE0	Special screw (for earth)	1	AA

PACKING PARTS

6- 1	CPADBA047JBKZ	Packing pad assembly	2	AN
6- 2	SPADBA162JBEZ	Packing pad (sheet)	1	AL
6- 3	SPAKCA942JBEZ	Packing case [AH-AP18CE]	1	AU
6- 3	SPAKCA941JBEZ	Packing case [AH-AP24CE]	1	AU
6- 3	SPAKCA929JBEZ	Packing case [AY-AP18CE]	1	AU
6- 3	SPAKCA940JBEZ	Packing case [AY-AP24CE]	1	AU

HOW TO ORDER REPLACEMENT PARTS

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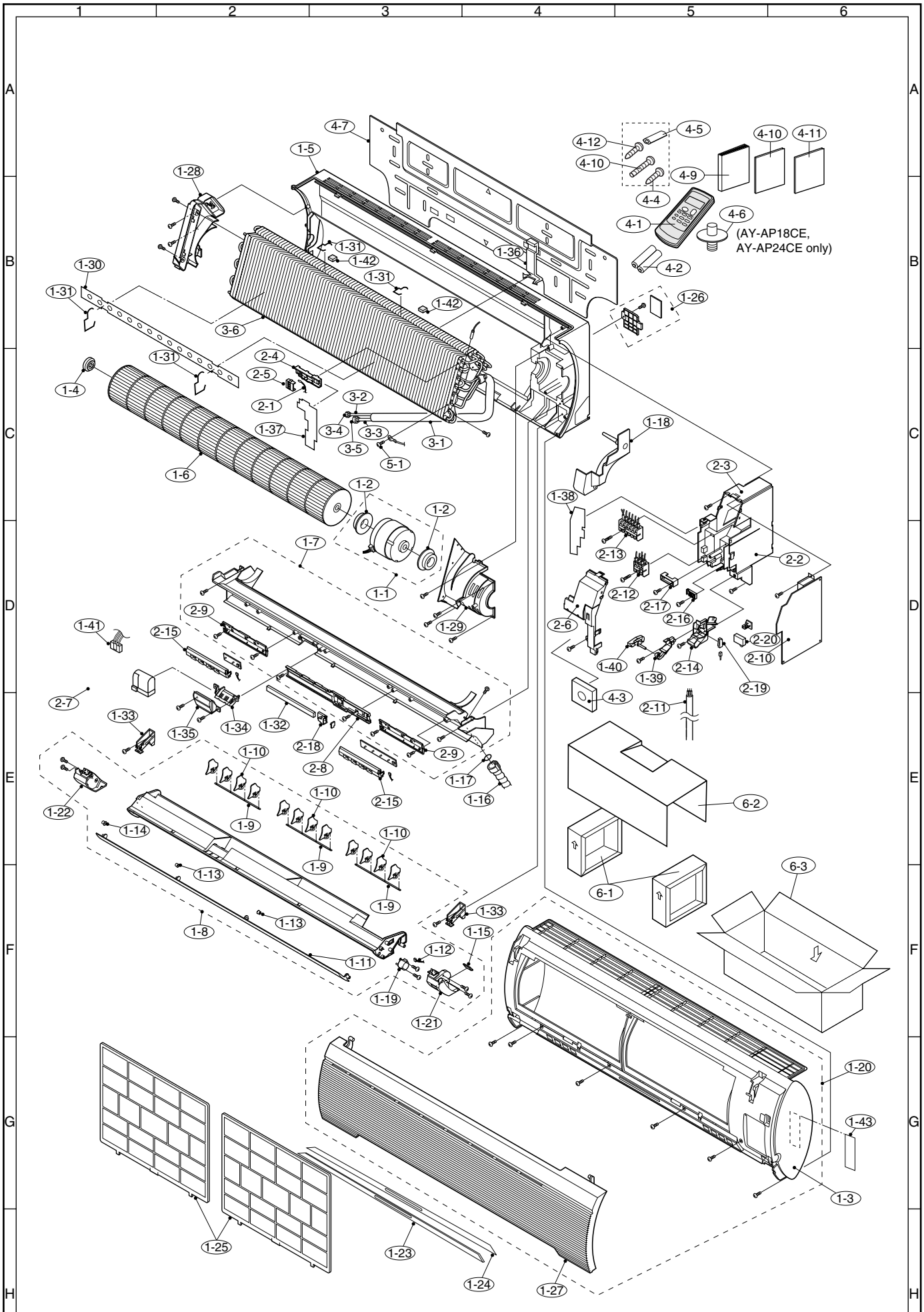
1. MODEL NUMBER 2. REF. NO.
3. PART NO. 4. DESCRIPTION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REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
		CABINET AND UNIT PARTS		
1- 1	LSUB-A024JBPZ	Motor angle sub [AU-A18CE]	2	AP
1- 2	CMOTLB002JBEZ	Fan motor [AU-A18CE]	1	BU
1- 2	CMOTLB015JBEZ	Fan motor [AU-A24CE]	1	BS
1- 3	NFANPA108JBFA	Propeller fan	1	BA
1- 4	LANGKA143JBPZ	Motor angle [AU-A18CE]	1	AX
1- 4	LANGKA145JBPZ	Motor angle [AU-A24CE]	1	AV
1- 5	PSKR-A241JBPZ	Bulkhead	1	AT
1- 6	GPLTMA060JBTA	Right side cover	1	AS
1- 7	CFTA-A275JBKZ	Control cover assembly [AU-A18CE]	1	AW
1- 8	GCAB-A221JBTA	Rear cabinet [AU-A18CE]	1	BE
1- 8	GCAB-A222JBTA	Rear cabinet [AU-A24CE]	1	BE
1- 9	GCAB-A189JBTA	Cabinet	1	BG
1-10	GGADFA028JBEA	Fan guard	1	AZ
1-11	PSEL-C263JBEZ	Bulkhead insulator A [AU-A18CE]	1	AE
1-11	PSEL-C280JBEZ	Bulkhead insulator C [AU-A24CE]	1	AE
1-12	PSPF-A827JBEZ	Compressor cover [AU-A18CE]	1	AS
1-12	PSPF-A834JBEZ	Compressor cover [AU-A24CE]	1	AS
1-13	PSEL-C017JBEZ	Cabinet seal	1	AC
1-14	TSPC-E021JBRZ	Name label [AU-A18CE]	1	AE
1-14	TSPC-E022JBRZ	Name label [AU-A24CE]	1	AD
1-15	TLABBA100JBRA	SHARP badge	1	AE
1-16	CCHS-A777JBTA	Base pan assembly [AU-A18CE]	1	BE
1-16	CCHS-A781JBTA	Base pan assembly [AU-A24CE]	1	BF
1-17	PSEL-0625JBE0	Angle seal	1	AA
1-18	PSEL-C264JBEZ	Bulkhead insulator B	1	AD
1-19	LBSHCA022JBF0	Bushing	1	AE
1-20	PFPFPC111JBEZ	Corner insulator	1	AC
1-21	PSEL-B643JBE0	Insulator No. 9	1	AC
1-22	PSEL-C275JBEZ	Insulator	1	AD
1-23	PSEL-C278JBEZ	Insulator	1	AC
1-24	PSEL-C281JBEZ	Cushion [AU-A18CE]	1	AC
1-24	PSEL-C282JBEZ	Cushion [AU-A24CE]	1	AD
1-25	PSEL-C370JBEZ	Insulator	1	AC
1-26	PSEL-C378JBEZ	Insulator	1	AB
1-27	PSEL-C379JBEZ	Insulator	1	AB
1-28	PSEL-C380JBEZ	Insulator	1	AC
1-29	PSEL-A191JBE0	Condenser seal	1	AA
1-30	PFTA-A095JBFA	Side cover	1	AR
		CONTROL BOX PARTS		
2- 1	RRLYJA088JBZZ	Relay [AU-A24CE]	1	BA
2- 2	LHLD-A544JBFA	Cord clamp holder	1	AG
2- 3	QW-IZA031JBZZ	Compressor cord [AU-A18CE]	1	AR
2- 3	QW-IZA034JBZZ	Compressor cord [AU-A24CE]	1	AR
2- 4	RC-HZA444JBZZ	Running capacitor	1	AY
2- 5	RC-HZA404JBZZ	Fan motor capacitor	1	AU
2- 6	QTANZA002JBZZ	Terminal board [AU-A18CE]	1	AN
2- 6	QTANZA001JBZZ	Terminal board [AU-A24CE]	1	AQ
2- 7	LHLD-A539JBFA	Cord clamp	1	AE
2- 8	PBOX-A379JBWZ	Control box	1	AR
2- 9	LBNDKA060JBW0	Capacitor clamp	1	AH
2-10	TLABCB563JBRZ	Wiring diagram [AU-A18CE]	1	AD
2-10	TLABCB564JBRZ	Wiring diagram [AU-A24CE]	1	AD
		CYCLE PARTS		
3- 1	PCMPRA355JBEZ	Compressor [AU-A18CE]	1	CL
3- 1	PCMPRA299JBE0	Compressor [AU-A24CE]	1	CZ
3- 2	PCON-A479JBPZ	Condenser [AU-A18CE]	1	CB
3- 2	PCON-A480JBPZ	Condenser [AU-A24CE]	1	CC
3- 3	DVLV-A518JBKZ	2 Way valve assembly [AU-A18CE]	1	AV
3- 4	LX-NZA246JBEZ	Flare nut	1	AN
3- 5	LX-NZA223JBEZ	Valve cap	1	AY
3- 6	PCAP-A074JBFZ	Bonnet	1	AF
3- 7	DVLV-A519JBKZ	3 Way valve assembly [AU-A18CE]	1	BA
3- 7	DVLV-A528JBKZ	3 Way valve assembly [AU-A24CE]	1	BF
3- 8	LX-NZA245JBEZ	Flare nut [AU-A18CE]	1	AK
3- 8	LX-NZA258JBEZ	Flare nut [AU-A24CE]	1	AM
3- 9	LX-NZA259JBEZ	Service cap [AU-A24CE only]	1	AK
3-10	PCAP-A073JBEZ	Bonnet [AU-A18CE]	1	AE
3-10	PCAP-A079JBEZ	Bonnet [AU-A24CE]	1	AE
3-11	CCPY-A138JBKZ	Capillary tube assembly [AU-A18CE]	1	AV
3-11	CCPY-A139JBKZ	Capillary tube assembly [AU-A24CE]	1	BF
3-12	PCOV-A379JBE0	Terminal cover [AU-A18CE]	1	AF
3-12	PCOV-A010JBE0	Terminal cover [AU-A24CE]	1	AF

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
3-13	LX-NZA226JBE0	Valve cap [AU-A18CE]	1	AX
3-13	LX-NZA260JBEZ	Valve cap [AU-A24CE]	1	AK
3-14	GLEG-A094JBE0	Compressor cushion [AU-A18CE]	4	AF
3-14	GLEG-A093JBE0	Compressor cushion [AU-A24CE]	3	AR
3-15	PSEL-A150JBE0	Gasket washer [AU-A24CE]	1	AA
3-16	MSPRPA018JBE0	Terminal cover holder[AU-A18CE]	1	AK
3-17	PSEL-B173JBE0	Terminal gasket [AU-A18CE]	1	AE
3-17	PSEL-B229JBE0	Terminal gasket [AU-A24CE]	1	AG

SCREWS, NUT AND BOLT

6- 1	LX-BZA072JBE0	Special screw	4	AB
6- 2	LX-NZ0128JBE0	Special nut	1	AB
6- 3	LX-BZA140JBE0	Special screw [AU-A18CE]	24	AB
6- 3	LX-BZA140JBE0	Special screw [AU-A24CE]	22	AB
6- 4	LX-BZA292JBE0	Special screw	19	AC
6- 5	LX-BZA166JBE0	Special screw	1	AB
6- 6	LX-BZA048JBE0	Special nut [AU-A18CE]	4	AA
6- 6	LX-BZA048JBE0	Special nut [AU-A28CE]	3	AA
6- 7	XCPSD40P25000	Tapping screw	1	AC
6- 8	XCTSD40P12000	Tapping screw [AU-A18CE]	2	AA
6- 8	XCTSD40P12000	Tapping screw [AU-A24CE]	4	AA
6- 9	XCTSD40P40000	Tapping screw	2	AA
6-10	LX-BZA075JBE0	Special screw	1	AA

PACKING PARTS

7- 1	CPADBA050JBKZ	Bottom pad assembly	1	AM
7- 2	CPADBA051JBKZ	Packing pad assembly	1	AM
7- 3	SPAKCA944JBEZ	Packing case [AU-A18CE]	1	AX
7- 3	SPAKCA945JBEZ	Packing case [AU-A24CE]	1	AX

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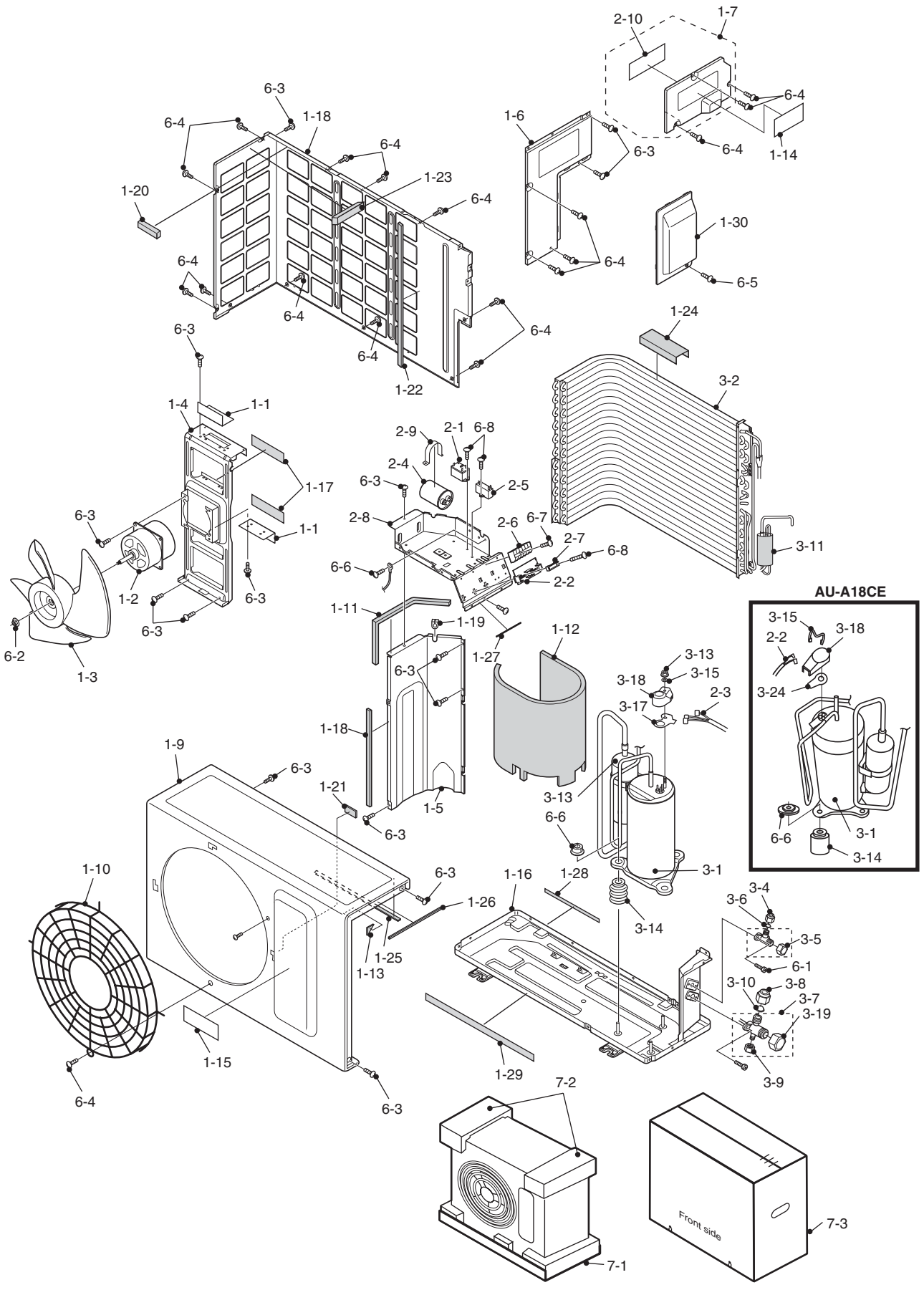
AU-A18CE
Front side

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
		CABINET AND UNIT PARTS		
1- 1	LSUB-A024JBPZ	Motor angle sub [AE-A18CE]	2	AP
1- 2	CMOTLB002JBEZ	Fan motor [AE-A18CE]	1	BU
1- 2	CMOTLB015JBEZ	Fan motor [AE-A24CE]	1	BS
1- 3	NFANPA108JBFA	Propeller fan	1	BA
1- 4	LANGKA143JBPZ	Motor angle [AE-A18CE]	1	AX
1- 4	LANGKA145JBPZ	Motor angle [AE-A24CE]	1	AV
1- 5	PSKR-A241JBPZ	Bulkhead	1	AT
1- 6	GPLTMA060JBTA	Right side cover	1	AS
1- 7	CFTA-A272JBKZ	Control cover assembly [AE-A18CE]	1	AW
1- 7	CFTA-A273JBKZ	Control cover assembly [AE-A24CE]	1	AW
1- 8	PSEL-C263JBEZ	Bulkhead insulator A [AE-A18CE]	1	AE
1- 8	PSEL-C280JBEZ	Bulkhead insulator C [AE-A24CE]	1	AE
1- 9	GCAB-A189JBTA	Cabinet	1	BG
1-10	GGADFA028JBEA	Fan guard	1	AZ
1-11	PSEL-C264JBEZ	Bulkhead insulator B	1	AD
1-12	PSPF-A827JBEZ	Compressor cover [AE-A18CE]	1	AS
1-12	PSPF-A834JBEZ	Compressor cover [AE-A24CE]	1	AS
1-13	PSEL-C017JBEZ	Cabinet seal	1	AC
1-14	TSPC-E015JBRZ	Name label [AE-A18CE]	1	AE
1-14	TSPC-E020JBRZ	Name label [AE-A24CE]	1	AE
1-15	TLABBA100JBRA	SHARP badge	1	AE
1-16	CCHS-A777JBTA	Base pan assembly [AE-A18CE]	1	BE
1-16	CCHS-A781JBTA	Base pan assembly [AE-A24CE]	1	BF
1-17	PSEL-0625JBE0	Angle seal	3	AA
1-18	GCAB-A221JBTA	Rear cabinet [AE-A18CE]	1	BE
1-18	GCAB-A222JBTA	Rear cabinet [AE-A24CE]	1	BE
1-19	LBSHCA022JBF0	Bushing	1	AE
1-20	PFPFPC111JBEZ	Corner insulator	1	AC
1-21	PSEL-B643JBE0	Insulator No.9	1	AC
1-22	PSEL-C275JBEZ	Insulator	1	AD
1-23	PSEL-C278JBEZ	Insulator	1	AC
1-24	PSEL-C281JBEZ	Cushion [AE-A18CE]	1	AC
1-24	PSEL-C282JBEZ	Cushion [AE-A24CE]	1	AD
1-25	PSEL-C370JBEZ	Insulator	1	AC
1-26	PSEL-C378JBEZ	Insulator	1	AB
1-27	PSEL-C379JBEZ	Insulator	1	AB
1-28	PSEL-C380JBEZ	Insulator	1	AC
1-29	PSEL-A191JBE0	Condenser seal	1	AA
1-30	PFTA-A095JBFA	Side cover	1	AR
		CONTROL BOX PARTS		
2- 1	RRLYJA088JBZZ	Relay [AE-A24CE]	1	BA
2- 2	LHLD-A544JBFA	Cord clamp holder	1	AG
2- 3	QW-IZA031JBZZ	Compressor cord [AE-A18CE]	1	AR
2- 3	QW-IZA034JBZZ	Compressor cord [AE-A24CE]	1	AR
2- 4	RC-HZA444JBZZ	Running capacitor	1	AY
2- 5	RC-HZA404JBZZ	Fan motor capacitor	1	AU
2- 6	QTANZA003JBZZ	Terminal board [AE-A18CE]	1	AR
2- 6	QTANZA004JBZZ	Terminal board [AE-A24CE]	1	AT
2- 7	LHLD-A539JBFA	Cord clamp	1	AE
2- 8	PBOX-A379JBWZ	Control box	1	AR
2- 9	LBNDKA060JBW0	Capacitor clamp	1	AH
2-10	TLABCB557JBRZ	Wiring diagram [AE-A18CE]	1	AD
2-10	TLABCB562JBRZ	Wiring diagram [AE-A24CE]	1	AD
		CYCLE PARTS		
3- 1	PCMPRA355JBEZ	Compressor [AE-A18CE]	1	CL
3- 1	PCMPRA299JBE0	Compressor [AE-A24CE]	1	CZ
3- 2	PCON-A474JBPZ	Condenser [AE-A18CE]	1	CC
3- 2	PCON-A478JBPZ	Condenser [AE-A24CE]	1	CC
3- 3	DVLV-A518JBKZ	2 Way valve assembly [AE-A18CE]	1	AV
3- 4	LX-NZA246JBEZ	Flare nut	1	AN
3- 5	LX-NZA223JBEZ	Valve cap	1	AY
3- 6	PCAP-A074JBFZ	Bonnet	1	AF
3- 7	DVLV-A519JBKZ	3 Way valve assembly [AE-A18CE]	1	BA
3- 7	DVLV-A528JBKZ	3 Way valve assembly [AE-A24CE]	1	BF
3- 8	LX-NZA245JBEZ	Flare nut [AE-A18CE]	1	AK
3- 8	LX-NZA258JBEZ	Flare nut [AE-A24CE]	1	AM
3- 9	LX-NZA225JBEZ	Service cap [AE-A18CE]	1	AX
3- 9	LX-NZA259JBEZ	Service cap [AE-A24CE]	1	AK
3-10	PCAP-A073JBEZ	Bonnet [AE-A18CE]	1	AE
3-10	PCAP-A079JBEZ	Bonnet [AE-A24CE]	1	AE
3-11	CCPY-A146JBKZ	Capillary tube assembly [AE-A18CE]	1	BA

REF. NO.	PART NO.	DESCRIPTION	Q'TY	CODE
3-11	CCPY-A137JBKZ	Capillary tube assembly [AE-A24CE]	1	BH
3-12	PSEL-B173JBE0	Terminal gasket [AE-A18CE]	1	AE
3-12	PSEL-B229JBE0	Terminal gasket [AE-A24CE]	1	AG
3-13	PACU-A012JBE0	Acumulator [AE-A18CE]	1	BB
3-14	GLEG-A094JBE0	Compressor cushion rubber [AE-A18CE]	4	AF
3-14	GLEG-A093JBE0	Compressor cushion rubber [AE-A24CE]	3	AR
3-15	MSPRPA018JBE0	Terminal cover holder[AE-A18CE]	1	AK
3-16	CCIL-A098JBEZ	Coil	1	AY
3-17	PVLVXA039JBE0	Reverse valve	1	BD
3-18	PCOV-A379JBE0	Terminal cover [AE-A18CE]	1	AF
3-18	PCOV-A010JBE0	Terminal cover [AE-A24CE]	1	AF
3-19	LX-NZA008JBE0	Special nut [AE-A24CE]	1	AA
3-20	PSEL-A150JBE0	Gasket washer [AE-A24CE]	1	AA
3-21	LX-NZA226JBE0	Valve cap [AE-A18CE]	1	AX
3-21	LX-NZA260JBEZ	Valve cap [AE-A24CE]	1	AK
3-22	CVLV-A618JBKZ	Reverce valve assembly [AE-A18CE]	2	BQ
3-22	CVLV-A625JBKZ	Reverce valve assembly [AE-A24CE]	2	BQ
3-23	PMUF-A042JBE0	Muffler [AE-A24CE]	1	AR

SCREWS, NUT AND BOLT

6- 1	LX-BZA072JBE0	Special screw	4	AB
6- 2	LX-NZ0128JBE0	Special nut	1	AB
6- 3	LX-BZA140JBE0	Special screw [AE-A18CE]	24	AB
6- 3	LX-BZA140JBE0	Special screw [AE-A24CE]	22	AB
6- 4	LX-BZA292JBE0	Special screw	19	AC
6- 5	LX-BZA166JBE0	Special screw	1	AB
6- 6	LX-BZA048JBE0	Special nut [AE-A18CE]	4	AA
6- 7	XCPSD40P25000	Tapping screw	1	AC
6- 8	XCTSD40P12000	Tapping screw [AE-A18CE]	2	AA
6- 8	XCTSD40P12000	Tapping screw [AE-A24CE]	4	AA
6- 9	XCTSD40P40000	Tapping screw	2	AA
6-10	LX-BZA075JBE0	Special screw	1	AA
6-11	LX-BZA060JBE0	Special screw	1	AH

PACKING PARTS

7- 1	CPADBA050JBKZ	Bottom pad assembly	1	AM
7- 2	CPADBA051JBKZ	Packing pad assembly	1	AM
7- 3	SPAKCA936JBEZ	Packing case [AE-A18CE]	1	AX
7- 3	SPAKCA943JBEZ	Packing case [AE-A24CE]	1	AX

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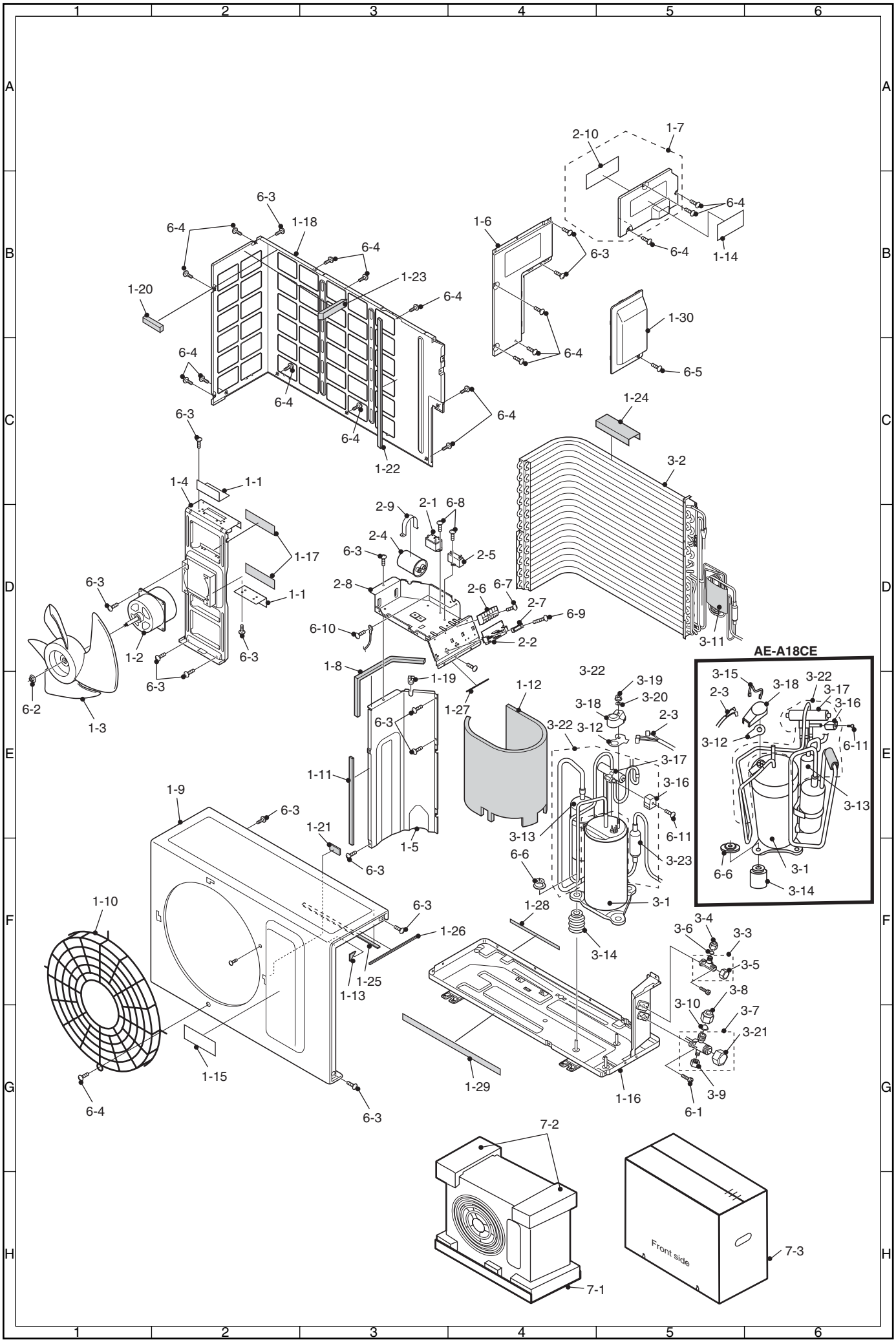
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7-1
7-3
Front Side

AY-AP18CE AY-AP24CE
AH-AP18CEAH-AP24CE
AE-A18CE AE-A24CE
AU-A18CE AU-A24CE

SHARP

'2002 SHARP CORP. (7U0.95E) Printed in the Netherlands